

SEQUENCE LISTING

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<110> NATIONAL RESEARCH COUNCIL OF CANADA

<120> A GENOMIC APPROACH TO IDENTIFICATION OF NOVEL BROAD-SPECTRUM
ANTIMICROBIAL PEPTIDES FROM BONY FISH

<130> 6899-6/PAR

<140> PCT/CA03/01323

<141> 2003-08-22

<150> 60/404,922

<151> 2002-08-22

<160> 329

<170> PatentIn Ver. 3.2

<210> 1

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
peptide

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Phe Phe Lys Lys Ala Ala His Val Gly Lys His

1 5 10

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

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ttcttcaaga aggcycyca ygtsggmaag ca

32

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<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 3
His Val Gly Lys Ala Ala Leu Thr His Tyr Leu
1 5 10

<210> 4
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<220>
<223> Description of Artificial Sequence: Primer

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caygtsggma aggcygcycyct saahcaytac ct 32

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<223> Description of Artificial Sequence: Primer

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gcccacttg tattcgcaag 20

<210> 6
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<220>
<223> Description of Artificial Sequence: Primer

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ctgaaggctc cttcaaggcg 20

<210> 7
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 7

Met Lys Phe Thr Ala Thr Phe

1 5

<210> 8

<211> 21

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<400> 8

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21

<210> 9

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 9

Lys Arg Ala Val Asp Glu

1 5

<210> 10

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 10

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17

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<213> Pleuronectes americanus

<400> 11

Lys Gly Arg Trp Leu Glu Arg
1 5

<210> 12

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<212> DNA

<213> Pleuronectes americanus

<400> 12

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<210> 13

<211> 6

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<213> Pleuronectes americanus

<400> 13

Tyr Gln Glu Gly Glu Glu
1 5

<210> 14

<211> 17

<212> DNA

<213> Pleuronectes americanus

<400> 14

ccctccccct cctggta 17

<210> 15

<211> 7

<212> PRT

<213> Pleuronectes americanus

<400> 15

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<210> 16

<211> 21

<212> DNA

<213> Pleuronectes americanus

<400> 16
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<210> 18
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<210> 19
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<400> 19
ctgaaggctc cttcaaggcg 20

<210> 20
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<400> 20
Phe Leu Gly Ala Leu Ile Lys
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<210> 21
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<210> 23
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<400> 23
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<210> 24
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<400> 24
His Gly Arg His Ala Ala
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ctgaaggctc cttcaaggcg 20

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<400> 27
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<210> 28
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<400> 29
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1 5

<210> 30
<211> 18
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<400> 30
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<210> 31
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<213> *Pleuronectes americanus*

<400> 31
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<210> 32
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<212> DNA
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<210> 33
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<213> *Pleuronectes americanus*

<400> 33
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<210> 34
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<210> 35
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<400> 35
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<210> 36
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<400> 36
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<210> 37
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<210> 38
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<400> 38
Gly Met Met Pro Asn Asn
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<210> 39
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<212> DNA
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<400> 39
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<210> 40
<211> 19
<212> DNA
<213> Pleuronectes americanus

<400> 40
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<210> 41
<211> 6
<212> PRT
<213> Pleuronectes americanus

<400> 41
Trp Met Met Pro Asn Asn
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<210> 42
<211> 18
<212> DNA
<213> Pleuronectes americanus

<400> 42
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<210> 43
<211> 19
<212> DNA
<213> *Pleuronectes americanus*

<400> 43
gttgttgag caggaatcc 19

<210> 44
<211> 6
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<213> *Pleuronectes americanus*

<400> 44
Ala Ala Leu Val Val Asp
1 5

<210> 45
<211> 20
<212> DNA
<213> *Pleuronectes americanus*

<400> 45
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<210> 46
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<212> PRT
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<400> 46
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<210> 47
<211> 19
<212> DNA
<213> *Pleuronectes americanus*

<400> 47
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<210> 48
<211> 6
<212> PRT
<213> *Pleuronectes americanus*

<400> 48
Val Phe Pro Ser Ile Val
1 5

<210> 49
<211> 17
<212> DNA
<213> *Pleuronectes americanus*

<400> 49
gtgttcacac catcgac 17

<210> 50
<211> 7
<212> PRT
<213> *Pleuronectes americanus*

<400> 50
His Thr Phe Tyr Asn Glu Leu
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<210> 51
<211> 20
<212> DNA
<213> *Pleuronectes americanus*

<400> 51
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<210> 52
<211> 6
<212> PRT
<213> *Salmo salar*

<400> 52
Met His Leu Pro Glu Pro
1 5

<210> 53

<211> 18
<212> DNA
<213> Salmo salar

<400> 53
atgcatctgc cggagcct 18

<210> 54
<211> 23
<212> DNA
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<400> 54
cattgcaaac atgtacaaac tag 23

<210> 55
<211> 6
<212> PRT
<213> Salmo salar

<400> 55
Met Asn Leu Pro Met His
1 5

<210> 56
<211> 17
<212> DNA
<213> Salmo salar

<400> 56
atgaatctgc cgatgca 17

<210> 57
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<400> 57
gggcaaatta aaggcg 16

<210> 58
<211> 8
<212> PRT
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<400> 58
Ile Val Gly Arg Pro Arg His Gln
1 5

<210> 59
<211> 23
<212> DNA
<213> Salmo salar

<400> 59
tcgtcggtcg tcccaggcat cag 23

<210> 60
<211> 8
<212> PRT
<213> Salmo salar

<400> 60
Gly Tyr Ala Leu Pro His Ala Ile
1 5

<210> 61
<211> 23
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<213> Salmo salar

<400> 61
atggcgtggg gcagagcgta acc 23

<210> 62
<211> 24
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<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation.

<400> 62
Gly Lys Gly Arg Trp Leu Glu Arg Ile Gly Lys Ala Gly Gly Ile Ile
1 5 10 15

Ile Gly Gly Ala Leu Asp His Leu
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<210> 63
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 63
Trp Leu Arg Arg Ile Gly Lys Gly Val Lys Ile Ile Gly Gly Ala Ala
1 5 10 15

Leu Asp His Leu
20

<210> 64
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 64
Gly Arg Arg Lys Arg Lys Trp Leu Arg Arg Ile Gly Lys Gly Val Lys
1 5 10 15

Ile Ile Gly Gly Ala Ala Leu Asp His Leu
20 25

<210> 65
<211> 25
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 65

Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala His Val Gly Lys His Val
1 5 10 15

Gly Lys Ala Ala Leu Thr His Tyr Leu
20 25

<210> 66

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 66

Phe Leu Gly Ala Leu Ile Lys Gly Ala Ile His Gly Gly Arg Phe Ile
1 5 10 15

His Gly Met Ile Gln Asn His His
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<210> 67

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 67

Gly Trp Gly Ser Ile Phe Lys His Gly Arg His Ala Ala Lys His Ile
1 5 10 15

Gly His Ala Ala Val Asn His Tyr Leu
20 25

<210> 68
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 68
Arg Trp Gly Lys Trp Phe Lys Lys Ala Thr His Val Gly Lys His Val
1 5 10 15

Gly Lys Ala Ala Leu Thr Ala Tyr Leu
20 25

<210> 69
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

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<223> c-term amidation

<400> 69
Arg Ser Thr Glu Asp Ile Ile Lys Ser Ile Ser Gly Gly Gly Phe Leu
1 5 10 15

Asn Ala Met Asn Ala
20

<210> 70
<211> 19
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

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<223> c-term amidation

<400> 70

Phe Phe Arg Leu Leu Phe His Gly Val His His Gly Gly Gly Tyr Leu
1 5 10 15

Asn Ala Ala

<210> 71

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 71

Phe Phe Arg Leu Leu Phe His Gly Val His His Val Gly Lys Ile Lys
1 5 10 15

Pro Arg Ala

<210> 72

<211> 25

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 72

Gly Trp Lys Ser Val Phe Arg Lys Ala Lys Lys Val Gly Lys Thr Val
1 5 10 15

Gly Gly Leu Ala Leu Asp His Tyr Leu
20 25

<210> 73

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 73

Gly Trp Lys Lys Trp Phe Asn Arg Ala Lys Lys Val Gly Lys Thr Val
1 5 10 15

Gly Gly Leu Ala Val Asp His Tyr Leu
20 25

<210> 74

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 74

Gly Trp Arg Thr Leu Leu Lys Lys Ala Glu Val Lys Thr Val Gly Lys
1 5 10 15

Leu Ala Leu Lys His Tyr Leu
20

<210> 75

<211> 26

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

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Ala Gly Trp Gly Ser Ile Phe Lys His Ile Phe Lys Ala Gly Lys Phe
1 5 10 15

Ile His Gly Ala Ile Gln Ala His Asn Asp
20 25

<210> 76
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 76
Gly Phe Trp Gly Lys Leu Phe Lys Leu Gly Leu His Gly Ile Gly Leu
1 5 10 15

Leu His Leu His Leu
20

<210> 77
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 77

Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala Lys His Leu Gly Gln Ala
1 5 10 15

Ala Ile Lys

<210> 78

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 78

Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala Lys His Leu Gly Gln Ala
1 5 10 15

Ala Ile Lys Gly Leu Ala Ser
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<210> 79

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 79

Gly Trp Lys Lys Trp Phe Thr Lys Gly Glu Arg Leu Ser Gln Arg His
1 5 10 15

Phe Ala

<210> 80

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

pleurocidin-like peptide

<220>

<223> c-term amidation

<400> 80

Phe Leu Gly Leu Leu Phe His Gly Val His His Val Gly Lys Trp Ile
1 5 10 15

His Gly Leu Ile His Gly His His
20

<210> 81

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 81

Gly Phe Leu Gly Ile Leu Phe His Gly Val His His Gly Arg Lys Lys
1 5 10 15

Ala Leu His Met Asn Ser Glu Arg Arg Ser
20 25

<210> 82

<211> 901

<212> DNA

<213> *Pleuronectes americanus*

<400> 82

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ggaaagggca ggtggttgga aaggattggt aaaggtagag tcacggaatt aattgcttt 180
ttacattgca aatattttc atataacatt gctggaaaat cacaaaaata agtagtcaat 240
atatttgccc aaatagaatc actttgattt caataataat caaaataaca acctaaaagg 300
cctttgatta gcatgttctt tcaatgaaat ggacattgta atttactttg atttcacat 360
gctacgacct gctgcagcaa catttgaaaa taaattgtc ccagaagatt ttaaagtaca 420
ttgttatagg cgatttatct ttctattact cagatatttg ttcaaaccac tagaataact 480
ggatctctat gctaaaataa taaaacacac attcagatgt taccagtcaa gattgaacgc 540
tgtttaaaag taagtatgaa acatcctctg tatgtataat tgtttaactg gtaacttata 600
gtcctaataa ttgcgttatg gaaatgtatt aattgtcatt taatataatt tgctggaatt 660
tatcactgtg tgtttttgtt tgtttttaca cagctggcgg gataattatc gggggggccc 720
ttgagtaagg acttctacca tcattactgt gtaatattta tagttatgat cagtacagtt 780
attaacaact tctctgtctc cgctgaactt ctccatcagt cacctcgggc aggggcaggt 840

gcaggggccc gattacgact accaggaggg ggaggagctc aacaagcgcg cagtcgatga 900
a 901

<210> 83
<211> 217
<212> DNA
<213> *Pleuronectes americanus*

<400> 83
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gagggtcgtc gtaagagaaa gtggttgaga aggattgga aaggtgtcaa gataattggc 120
ggggcgggcc ttgatcacct cgggcagggg caggtgcagg ggcaggatta cgactaccag 180
gaggggcagg agtcaacaa gcgcgcagtc gatgaaa 217

<210> 84
<211> 968
<212> DNA
<213> *Pleuronectes americanus*

<400> 84
gccactttg tattcgcaag gtaatttga ttttttcat attcatttag acaaattgtc 60
tcagcttgtt actgtataat gcaaaagtta atgatcttta ttttctgtt ttttttgta 120
gaatgaagt cactgccacc ttctcatga ttgccatctt cgtctcatg gttgaacctg 180
gagagtgtgg ctggggaagc tttttaaaa aggtgctca cggtagagtc acagaattaa 240
ttagcttttt gctttgcaaa tttttttt ataacagctg gaaaatcaca aaaataaata 300
gtatataat ttggccaata aaatcacttt gattcaata ataactaaa taaccaacct 360
aaaaggcctt tgattagcat gtctctcaa tgaaatgtac gttgaggttt atttgattc 420
tcacaagcac caacctgctg cgtcaacaat tgaattcaa tttgtccaa aggaattcaa 480
agtaaattt tctaggcgat ttaattcttc cattactctg attgtttta aaaatataga 540
ataactcaat ctctatgata aaacaattac acatacttc agattttat aggacaagat 600
tgaaaacttc ttacaagtat gtataaaca tcatctgtat gtataattgt ttaacatgta 660
acaactagtc ctactaattg tgttaattg tcatttaata tcaattgctt gagtttatca 720
ttatgtgttt tgttttttt tacacagtg gcaagcatgt tggcaaggcg gcccttacgt 780
aaggacttct accattttac tgtataatt tgaatgtgt atcaccagta ctgtttttga 840
caacttctct attcctgctg actctctcca tccgactcat ccgcagtcac taccttggcg 900
ataagcagga gctcaacaag cgtgcagtcg atgaagaccc aaatgttatt gttttgaa 960
gaagaaat 968

<210> 85
<211> 654
<212> DNA
<213> *Pleuronectes americanus*

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gagtgtttct taggagccct tatcaaagg gccatacatg gtagagtcaa ggaattaatt 120
agatttttac atgtcaata atgtagtaga acatatata gtagtcaata tatttgacca 180

agtagaatca ttttgatttc aataataatc aaaataacaa tctccaggcg atttaatat 240
 tgcaataatt ggattttata gaatacggaa caactggatc ttaatgctaa aataatccaa 300
 catacattct gattttgccca ggcaaaatta aacactactt taaagtatgt ataaaacata 360
 atctgtatgt tataacaaat actccaagca attgtgtgat ggaaatgtat tcattgtcat 420
 ttaataaat ttgcttgagt ttatcatctt gtgtttttgt ttgtttttc acaggtggca 480
 ggtttatcca tgggtaagga ctctaccat catgactgtg ttttttaatt attattatca 540
 tcagtactgt tattgacaac ttcactgtgc tcgctgactc tctccatcag aatgatccaa 600
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<210> 86
 <211> 684
 <212> DNA
 <213> *Pleuronectes americanus*

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 ttctgtttt tttttaga atgaagtca ctgccacctt cctcatgatg ttcattctcg 180
 tctcatgggt tgaacctgga gagtgtggtt gggaagcat ttttaagcat ggctgcatg 240
 gtaaagtcac ggaattaatt agcttttaac ttgcaaata ttgtttttt ttttaacagc 300
 tggaaactca caaaaataaa tagccgatat atttgcccaa ttataatcac ttgatctaa 360
 ataacaacct aaaaggcctt tgattagcat gtttctcaa taaatgatt gaacactact 420
 taaaggatg tataaaacat catcatgtgt tttgtttgt tttacacag ctgccaagca 480
 tattggccat gcagccgtta agtaaggact tctaccatta ttactgtata attttgatag 540
 tattatcacc agtattgtta ttgacaactt ctcttttcc tgctgatccg actcatccgc 600
 agtcattacc ttggcgagca gcaagatctc gacaagcgcg cagtcgatga agacccaaat 660
 gttattgttt ttgaatgaag aaat 684

<210> 87
 <211> 826
 <212> DNA
 <213> *Pleuronectes ferruginea*

<400> 87
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 gagtgtcgtt gggggaaatg gttaaaaag gccacacacg gtagagtcac agaattaatt 120
 agctttttgc ttgcaaata ttttttata acagctggaa aatcacaaaa ataatagtc 180
 tatatatttg gccaataga atcactttgc ttcaataaa aatctaaata acaacctaaa 240
 agtcttttga ttgcatctt ccatcaatga aatggacgtt gaggtttatt ttgattctca 300
 catgcaccga cctgctatgt caacaatga atacaaatt gtcccagagg aattcaaagg 360
 aaattttct aggcgatcta atctttccat tactcggatt tgtttttaa tatatagaat 420
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 ggcccttacg taaggacttc taccatcatt actgtataat ttgatagta ttatcaccag 720
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826

<210> 88

<211> 1300

<212> DNA

<213> *Pleuronectes americanus*

<400> 88

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tgtcaatgta taatgcaaat gtaacaatc gttttgttct tatgttgtgt ttgtaggatg 480
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<210> 89

<211> 3500

<212> DNA

<213> *Pleuronectes americanus*

<400> 89

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<210> 90
<211> 1003
<212> DNA
<213> Hippoglossoides platessoides

<400> 90
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ttctgttttt tttagaatg aagttcactg ccaccttct gatgtgttc atcttcgtcc 180
tcattggtga acctggagag tgtggatgga aaagtgtgtt tcgtaaggct aagaaaggta 240
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tcacaaaaat aaatagtcga tatatttggc caattagaat cactttaatt tcaataataa 360
tctaataaac aacctaaaag gcctttgatt agcatgttc tcaatgaaa tggacattga 420
ggtttttttt gatttcaca tgcaccgacc tgtcggcaa ccattgaatt cagatttgc 480
ccagaagaat tcaaagtaca ttttccagg cgattaaatc ttccattac tcagattcaa 540
aaataaataa atggaataat tgaagcacta tgataaataa attacacatt cactctgact 600
ttacaagtca agattgaaca ctattaaaa gtgtgtataa aacaacatct gtatgcataa 660
ttgttaact gtaatagtc ctaataattg ttttatggaa atgtattaat ttacatttaa 720
tattatttgc ttgagttac catcatgtgt tttgtttgt tttacacag ttggcaagac 780
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tattatcacc agtactgtta ttaactactt ctctgtctg ctgactctct ccatccgact 900
catctgcagt cattaccttg gcgagcagca ggagcttgac agcgcgcagt cgatgaggac 960
cccagtcta ttgtcttga ctgaagaagt cgccttgaag gag 1003

<210> 91
<211> 1007
<212> DNA
<213> Hippoglossoides platessoides

<400> 91
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actgttaata gtcctaataa ttgttttatg gaaatgtatt aattacatt taatattatt 720
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cagtcattac ctitggcaagc agccggagct cgacaagcgc gcagtcgatg aggaccccag 960
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<210> 92
<211> 999
<212> DNA
<213> Hippoglossoides platessoides

<400> 92
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ggaattaata cgctttttac attgcaaata gattttttat aacagctgga aaatgacaaa 300
aataaatagt cgatatattt ggccaattag aattattttg attcaataa taatctaaat 360
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aattcaaagt aaattttcca ggggattaaa tcttccatt actcggattt aaaaaaaaaa 540
aaaatagaat aactgaattg ccatgaaaaa ataattacac atactgtctg atttacaag 600
tcaagattga acactactta aaagtatgta taaaacatca tctgtatgta taattgttta 660
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<210> 93
<211> 179
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 93
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gaggctgggt ggggaagtat ttcaaacaat attttcaaag ctggaaagt catccatggt 120
gcgatccagg cacacaatga cggcgaggag caggatctcg acaagcgcgc agtcgatga 179

<210> 94
<211> 224
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 94
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gagggttttt ggggaaagt tttgaaattg ggcattgatg gaatcgggct gctccatcag 120
catttgggtg ctgacgagca gcaggagctc gacgagcgt cagaggagga cgagcccaat 180
gttattgttt ttgaatgaag aagtcgcatt gaaggagcct tcag 224

<210> 95

<211> 862
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 95
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cattgcaaat actttaatat aacatagttg gaaaaccaca aaaataagta gtcgatatat 180
ttggccatat agaatacactt tgatttcaat aataatcaaa acaacaatca aaaagcccat 240
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agtcgccttg aaggagcctt ca 862

<210> 96
<211> 849
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 96
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cattgcaaat actttaatat aacatagctg gaaaatcaca aaaataagta gtcgatatat 180
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gcgctcagtg gatgacgagc ccagttctat tgcttttgac tgaagaagtc gccttgaagg 840
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<210> 97
<211> 678
<212> DNA
<213> Hippoglossus hippoglossus

<400> 97

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<210> 98

<211> 690

<212> DNA

<213> Hippoglossus hippoglossus

<400> 98

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<210> 99

<211> 847

<212> DNA

<213> Pleuronectes ferruginea

<400> 99

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 ctctctccat cagtctcct catggtcaaa gatacgacga gcagcaggag cttgacaagc 780
 gctcagtcga tgacaacccc ggtgctattg ttttgactg aagacgtcgc cttgaaggag 840
 ccttcag 847

<210> 100
 <211> 191
 <212> DNA
 <213> *Pleuronectes ferruginea*

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 gcagtcgatg a 191

<210> 101
 <211> 1100
 <212> DNA
 <213> *Pleuronectes americanus*

<400> 101
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 cctgtgtata taaagagttg catctgttgt tatcagtaga caacagatta cacctttgaa 180
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 gaataattac ccgcaacagc 1100

<210> 102
 <211> 1300
 <212> DNA

<213> *Pleuronectes americanus*

<400> 102

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tattactcag atattgttc aaaccaatag aataactgga tctctatgct aaaataataa 780
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<210> 103

<211> 824

<212> DNA

<213> *Hippoglossus hippoglossus*

<400> 103

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gagaggggtt gggaaattgg atggggcccc atatcagcgg tagagtcacg gaattaattt 120
gctttttcca ttgcaaatat ttaatatgt catagctgga aaatcacgaa ataagtagtc 180
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aggcctttga ttagcatgtt cttcaataa aatggacatt gaagtttatt ttgatgctca 300
catgcaccga cctgctgcgg caacaattga aatcaaatgt gtctcagaat ttaaagtaca 360
ttttctagg tgatttaate ttccattaa cttgatttgt tttataaat atagaataac 420
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tccaaataat tgtgttatgg aaatgtatta attgtcattt aatatcattt gcttgaattc 600
atcaccatgt gtttttgtt tgtttttaca caggtgaaaa gaaggccttg cagtaaggac 660
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tctctgtct cgtgactct ctccatcagg atgaactcag agcgtcgcag ttacgacgag 780
cggcagcagc agcagcagga gctcgacaag cgcgcagtcg atga 824

<210> 104

<211> 193
<212> DNA
<213> Hippoglossus hippoglossus

<400> 104
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gagggttttg gaaattggat cgtgcgccct atcggagggtg aaaagaaggc cttgcagatg 120
aactcagagc gtcgcagtta cgacgagcgg cagcagcagc agcaggagct cgacaagcgc 180
gcagtcgatg aaa 193

<210> 105
<211> 281
<212> DNA
<213> Hippoglossus hippoglossus

<400> 105
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gagagtcttt ttgaaagt cctcaagaaa gttgtccatg ctggcacgtc aattggcgag 120
acagccttgc atgtgccgc agagcatcac gggcttcatg cgcacacggt gtgtcacggg 180
cgtcacgggg gtcacaggcg tcacgggggt cacaggcgtc acgggcgtcg cggttacgac 240
gagcagcagc aggaggagct cgacaagcgc gcattcgatg a 281

<210> 106
<211> 194
<212> DNA
<213> Hippoglossus hippoglossus

<400> 106
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gaactcagag cgtcgcagtt acgacgagcg gcagcagcag cagcaggagc tcgacaagcg 180
cgcagtcgat gaaa 194

<210> 107
<211> 669
<212> DNA
<213> Hippoglossus hippoglossus

<400> 107
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cgattttac atggcaaata tttaagata acacaccata tgagtagtcg atatatttg 180
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atttgatta attggatttg ttttaaaaa tatagaataa ctggatcttt atggtataat 300
aattaaacat acattctgat ttaccagtc aagattgaac actacttaga agtatgtata 360
aaacatcatc tgtatgtata attgttaac tgtaacgaa tagtccaaat aattgtgta 420
tggaatgta ttaattgca ttaatatca ttgcttgaa ttatcacca tgtgttttg 480

tttgttttta cacagttgga aagttgatcc atgggtaagg acttctacca tcattactgt 540
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ctctccatca gactcatcca tggcgggtac gacgagcagc aggagctcga caagcgcgca 660
gtcgatgaa 669

<210> 108
<211> 1006
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 108
gccacatttg tattcgcaag gtaagagcga tatatttcaa attcattcgg atgagaccaa 60
gcatttgga aatgtgctca gcttggtact gttaaatgca aatgttaaca atatcctttt 120
tctgttgttt ttgtagaatg aagttcgctg ccgccttcct catgatgttc atggtcgtcc 180
tcatggctga acccggagag gctcgttggg gaacgttctt caaacatatt tcaaaggta 240
gagtcacaga attaatttgc tttttacatt gcaaataatt tcatataaca tagctggaaa 300
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gtttttaaaa atatagaata actggatctt tatgctaaaa taataaatca tacattctga 600
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aagggtcatt catgggtaag gacttctacc atcattactg tgtattttta atagtattat 840
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aggcacacaa tgacggcgag cagcaggatc tcgacaagcg ctcaagtggat gatgagccca 960
gtgttattgt ttttgaatga agaagtcgcc ttgaaggagc cttcag 1006

<210> 109
<211> 1007
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 109
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gcatttgga tctgtgctca acttgtaact gtataatgca aatgttaaca atattctttt 120
tctgttgttt ttgtagaatg aagttcgctg ccgccttcct catgatgttc atggtcgtcc 180
tcatggctga acccggagag ggtgcttggg tacctgcctt gaataggatc tatcatggta 240
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atcacaaaaa tgagtactcg atatatgttg caaagtagaa tccctttgat ttcaataata 360
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tagtttattt tgattctgac atgcaccaac ttgctgcggc aacaattgaa tcaaattg 480
tctcagaaaa atttaaagta catttttctt tccattagtc ggatttgtt taaaaaatc 540
agaataactg gatctttatg ctaaaataat aaatcataca ttctgatttt accagtcaag 600
attgaacgct acttaaaagt atgtataaaa catcatctgt attgataatt gttaacttt 660
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 cactggcacg gtgacgtcga gcagcaggct ctcgacaagc gctcagtga ggaccagccc 960
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<210> 110
 <211> 1007
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 110
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 tcatggctga acccgagag ggtgcttga tgcctgcctt gaataggatc tatcatgga 240
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 atcaaaaaa caatcaaaaa ggccattgat tagcatgttc cttcaatgaa atggacattg 420
 tagtttatt tgattctgac atgcaccaac ttgctgcggc aacaattgaa ttcaaattg 480
 tctcagaaaa atttaaagta ctttttctt tccattaatc ggatttggtt taaaaaatac 540
 agaataactg gatctttatg ctaaaataat aaatcataca ttctgattt accagtcaag 600
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 gcttgaatt atcacatgt gttttgtt gtttttacac agctctactg aggatcaatc 780
 ggtaaggact tctacatca ttactgtgta attttaatag tattatcatc agtactgtta 840
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 cactggcacg gtgacgtcga gcagcaggct ctcgacaagc gctcagtga ggaccagccc 960
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<210> 111
 <211> 201
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 111
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 gagtgtggtt ggaaaaagt gttcactaaa ggtccaagc acctggcca ggcggccatt 120
 aacggttgg cctctgcga agagcagcaa gagctcaga agcgtcaga gcatgacgag 180
 cccagtgcta ttgttttga a 201

<210> 112
 <211> 862
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 112
 atgaagtca ctgccacctt cctggtgtg ttcatggctg tcctcatggc tggatccgga 60

gagtgtggtt ggaaaaagtg gctccgtaaa ggtagagtca tggatttaat ttgcttttta 120
 cattgcaaat actttaatat aacatagttg gaaaatcaca aaaataagta gtcgatatat 180
 ttggccatat agaactcatt tgatttcaat aataatcaaa acaacaatca aaaagcccat 240
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 caacctgctg cggcaacaat tgaaatcaaa ttgtctcag aagaattcaa agtacattgt 360
 tctaggcgat ttaatcttcc cattcatcgg atttgttttt aaaaatatag aataactgga 420
 tctctatgtt aaaataataa aacacacatt ctgattttac ctgtcaagat tgaacacgac 480
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 caccatgtgt ttttgtttgt ttttacacag gtgccaagca ctttgccag gcggccatta 660
 agtaaggact tctaccatca ttactgtgta attttaacag tattatcatc agtactgtta 720
 ttgacaacta ctcttgtctc tgtgactctc tccagggggt tggcctcttg cgaagagcag 780
 caggagctcg acaagcgtc aatggatgac gagcccagtg ctattgtttt tgactgaaga 840
 agtcgccttg aagagccttc ag 862

<210> 113
 <211> 782
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 113
 gccactttg tattcgcaag gtaagagcga tatatttcaa actcatatag acgagaccaa 60
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 tctgttttt ttgcagaatg aagctcgctg ctgccttcct ggtgtgttc atggctgctc 180
 tcatggctga acatggagag ggttttgggg atttctatat gaagcctggt agagtcacgg 240
 aattaattcg attttaacat ggcaaatatt ttactataac ataccatag agtagtcgat 300
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 aaacatacat tctgatttta ccagttaaga ttgaacgcta cttaaaagta tgtataaaac 420
 atcatctgta catataattg ttaactgtt aaccaatagt ccaaataatt gtgttggtga 480
 aatgtattaa ttgtcattta atactattg ctggaatttg tcaccatgtg ttgttgttg 540
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 ttttagcagt attatcatca gtactgttat tgataacttc tctgtctcg ctgactctct 660
 acaggtacat cagaagtcct tatggttacg acgagcagca ggaggtcgac aagcgtcag 720
 tcgatgacaa cccagtgcc attgcttctg actgaagaag tcgccttgaa ggagccttca 780
 ga 782

<210> 114
 <211> 185
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 114
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 gagggttatt ggcgttccg caaccaccgt ggtgaaaggt tatccagag gcatttcgct 120
 gacgtcgagc agcaggagct cgacaagcgc tcagtggatg acgagcccag ttctattgct 180
 ttgga 185

<210> 115
<211> 837
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 115
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ttttggaatg cttttcacc gggtcaccca tggtcgggtc acggaagtag ttcgattttt 120
acatggcaaa tatttaaatg aaacatacca tatgagtagt cgatatattt ggccaagtag 180
aatcactttg acttcaataa taatcaaaaa cataatcaaa aagcccattg attagcatgt 240
tccttcaatg aatggacat tgaggtttat ttgattctc acaggcacca acctgctgcg 300
gcaacaattg cattcaaatt tgcccaaag aaacttaatt aacattttct ggcgatttaa 360
tccttgcata aattggattt gtttttaaaa atatagaata actggatctt tatgctcaa 420
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gtataatgtt aataatagca ttatcatcag tactgttatt gataacttct cttgtctcgc 720
tgactctctc catcagattc atcaaacgtc acggtgacgt cgagcagcag gagctcgaca 780
agcgctcagt ggatgacgag cccagttcta ttgcttttgc ctgaagaagt cgccttg 837

<210> 116
<211> 748
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 116
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gactgtattt ttgattgat tgcgactgcg gtccacaatg gtaagtcaag gaattaattc 120
gatttttacg tggcaaatat ttagtataa cataccttat gagtagtca tatattgac 180
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tctccatcag actactcggc ttatcatatg ggctctcccg gttctggcac ggtgacgtcg 660
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gaagaagtcg ccttgaagga gccttcag 748

<210> 117
<211> 748
<212> DNA
<213> Glyptocephalus cynoglossus

<400> 117

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gatttttact tggcaaatat ttagtataa cataccttat gagtagtga tatatttgac 180
caagcagaat cattttgatt tcaataataa tcaaaataac aatctctagg caatttaata 240
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<210> 118

<211> 748

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 118

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gatttttact tggcaaatat ttagtataa cataccttat gagtagtga tatatttgac 180
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tctccatcag actactcggc ttcatcatg ggctcccag gttctggcac ggtgacgtcg 660
agcagcagga gctcgacaag cgctcagtgg atgaggagcc cagtgtctatt gttttgaat 720
gaagaagtcg ccttgaagga gccttcag 748

<210> 119

<211> 802

<212> DNA

<213> Eopsetta jordani

<400> 119

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tgattattac atgccaaata tgtaatgaa acataccata tgagcagtcg tattatttg 180
acaagtagaa tcactttgat ttcaatagta attaaaataa caatcaaaaa ggcctttgat 240
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cgctgactct ctctatcaga ttaaaccag ggtatcgcg ttacgacgag cagcaggagc 780
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<210> 120
<211> 661
<212> DNA
<213> Eopsetta jordani

<400> 120
atgaagtca ctgccacctt cctggtgttg tcttgggtcg tctcatggc tgaacctgga 60
gagggtttct ttggagccct tctcaaaggt agagtcacgg aattaattg attgttacat 120
ggcaaataat tttgtataac atatcatatg agcagtcgat gtatttgacc aagaagaatc 180
attttgattt caataataat caaaataaca atctcttgga gattatatat ttgcaataat 240
tggattttat aaaatataga acaactggat cttaatgcta aaataattaa acatacatc 300
tgattttacc agtcaaaatt aaccactact ttaaagtatg tataaaacat catctgtatg 360
tttaattgtt taacttttaa caaatagtc aaataattgt gtaatggaaa tgtattcatt 420
gtcatataat atagtttgc tgaacttate accgtgtgtt ttgtttgtt tttcacagg 480
tgcccaggcg ctccatgggt aaggacttct accatcatga ctgtgtaagt ttaataatat 540
tatcatcagt actgttatta acgacttctc ttgtctcgct gactctctcc atcagaatca 600
tccacaatgc tctgcacggg tacgacgagc agcaggaact caacaagcgc gcagtcgatg 660
a 661

<210> 121
<211> 1011
<212> DNA
<213> Eopsetta jordani

<400> 121
gccacittg tattcgcaag gtaagatcaa ttttttcaa attcatttag acgagaccaa 60
ccgtttgcga aatgtgetca gcttgttatt gtataataac aaagtaacg atctttattt 120
ttctgtttt tttagaatg aagttcactg ccaccttct gatgttggtc atctctgtcc 180
tcatggttga acctggagag tgtggttgga aagattggtt tcgtaaggct aagaaaggta 240
gaatcacgga attaattagc tttttacatt gcaaatagat ttttataac agctggaaat 300
cacaaaaata aatagtcgat atatttgcc aattagaatc actttaattt caataataat 360
ctaaataaca acctaaaagg cctttgatta gcatgttct tcaatgaaaa ggacattgag 420
gtttattttg attctcatat gcaccgacct gtgcggcaac aattgaattc agatttgctc 480
cagaagaatt caaagtaacat tttccaggc gattaaatct ttccattact cggatttaa 540
aataaataaa tagaataact gaagcgctat gataaaataa ttacacatc attctgattt 600
tacaagtcaa gattgaacac tattaataag tgtgtataaa acatcatctg tatgtataat 660
tgtttaactg ttaatagct taataattgt gttatggaaa tgtattaatt tacattta 720
atcatttgc tgaatttacc atcatgtgtt ttgtttgtt ttacacagt tggcaagact 780
gttgcggtt tggcccttaa gtaagaact ctaccatcat tactgtataa tttgatagt 840
attatcacca gtactgttat taactactt tctgtctcg ctgactctc ccatccgact 900
catccgcagt cattacctg gcgagcagca ggagcttgcc aagcgcgcag tcgatgacga 960

ccccagtgtt attgtctttg actgaagaag tcgccttgaa ggagccttca g 1011

<210> 122

<211> 826

<212> DNA

<213> *Pleuronectes vetulus*

<400> 122

atgaagttca ctgccacctt cctcatgatt ttaattctcg tcctcatggt cgaacctgga 60
gagtgtggta ttaggaaatg gtttaaaaag gctgctcac gtaaagtcac ggaattaatt 120
tgctttttgc ttacaaata ttttttata gcagctggaa aatcacaaaa ataaatagtc 180
gatgtatttg gccaaataga atcactttga ttcaaataa taatctaaat agcaacctaa 240
aaggcctttg attagcatgt tccttcaatg aaatggatgt tgaggtttat ttgattctc 300
acatgcaccg acctgctgcg gcaacaattg aattcaaatt tgtcccaaag gaattcaaag 360
taaacttttc tagatgattt aatctttcca taactcggct ttgttttaa aaatatataa 420
taactcaatc actatgataa aataataaca catacattct gatttataca agacaagatt 480
gaaaacttct taaaagtatg tataaaacat catctgtttg tataattgtt tatcatttca 540
caaaaagtcc aactaattgt gttatggaat tgtataaatt gtcatttaat ataattttt 600
tgagtttate aatatgtgtt ttgtttgtt ttacacagtt ggcaaggaag ttggcaaggt 660
ggcccttaag taaggacttc taccattatt actgtataat ttgatagta ttatcaccgc 720
tactgttatt gacaacttct cttttctgc tgactcttc catctgactc atctgcagt 780
cttgccctga caagcagcag cagctcgaca agcgcgcagt cgatga 826

<210> 123

<211> 1017

<212> DNA

<213> *Pleuronectes vetulus*

<400> 123

gccaccttg tattcgcaag gtaatatcga ttttttcaa actcatttag acgagaccaa 60
gcattggga aatgtgctaa gggtgttact gtataatgca aaattaatga tctttattt 120
tctgttttt ttgcagaat gaagttcact gccaccttcc tcattgattt aatcttcgc 180
ctcatggctg aacctggaga gtgtggttg aagaaatggt ttaaaaaggc tgttcacggt 240
agagtcacgg aattaattg ctttttgctt tacaaatatt ttttatagc agctggaaaa 300
tcacaaaaat aaatagtcga tgtatttggc caattagaat cactttgatt tcaataataa 360
tctaataatg aacctaaaag gcctttgatt agcatgttcc ttcaatgaaa tggatgttga 420
ggtttattt gatttcaca tgcaccgacc tgctgcggca acaattgaat tccaatttgt 480
cccaaaggaa ttcaaagtaa acttttctag gcgatttaat cttccataa ctcggctttg 540
tttttaaaa tatataataa ctcaatccct atgataaaat aataacacat acattctgat 600
ttatacaaga caagattgaa aacttcttga aagtatgtat caaacatcat ctgtttgtat 660
aattgttaa cagttcacaa aaagtccaac taattgtgtt atggaattgt ataaattgtc 720
atttaataa attttttga gttatcaat atgtgtttt gttgtttta cacagttggc 780
aagaaagtg gcaaggtggc ccttaagtaa ggacttctac cattattact gtgtaattt 840
gatagtatta tcaccagtac tgttattgac aacttctctt ttctgtctga ctctctccat 900
ccgactcatc tgcagtgtt accttggcga gcagcagcag ctgcacaagc gtgcagtcga 960
tgaagagccc agtgttattg cttttgactg aagaagtcgc cttgaaggag ccttcag 1017

<210> 124
<211> 814
<212> DNA
<213> *Platichthys stellatus*

<400> 124
atgaagtcca ctgccacctt cctcatgatg ttcatcttcg tcctcatggt tgaacctgga 60
gagtgtgggt ggaggaaatg gattaaaaag gctactcacg gtaaagtcac ggaattaatt 120
cgttttttgc ttgcaaata tttttttat aacagctgga aagtcacaaa aataaatagt 180
caatatattt ggccaattag aatcactttg agttcaataa taatctaaat aacaaccaa 240
aaggccttcc cttaaatgaa atgtacgttg aagtttattt tgaatctcac atgcaccgac 300
ctgctgcggc acaaatgaa ttcaaatttc tcccagagga attcaaagta aatttttcta 360
ggcgatttaa tctttccatt actctgattt gttttaata tatagaatga ctcaattgct 420
atgataaaat aataagccat acattctgat tttacaaga caagattgaa aacttcttaa 480
aagtacgtat aaaacatcat ctgtatttat aattgtttaa catttaacaa attgcctac 540
taattgtgtt atggaaatgt ataaattgtc atttaataac atttgcttga gtttatcatt 600
attgtttttt gttgtttttt acacagttgg caagcatatt ggcaaggcgg cccttgagta 660
agaacttcta ccatcattac tgtataattt tgatagtatt atcaccagta ctgtatttga 720
caacttctct tgtctgatg actctgttca tccaactcat ctgcagtgtc tacattggcg 780
ggaagcaaga actcgacaag cgcgcagtcg atga 814

<210> 125
<211> 670
<212> DNA
<213> *Reinhardtius hippoglossoides*

<400> 125
atgaagtcca ctgccacctt cctggtgttg ttcatggtcg tcctcatggc tgaacctgga 60
gagggttttt tcggattgct tttcacggg atccaccatg gtagggtcac ggaattaatt 120
agatgtttac atggcaaata ttttaagata acacaccata tgagtagtcg atatatttga 180
ccaattagaa tcactttaat ttcaataata atcacaataa caatctctag gccattaat 240
ctttccatta atcggatttg ttttttaaa tatagaataa ctggatcttt atgctaaaat 300
aatgaaacat acattctgat ttaccagtc aagattgaac gttacttaaa agtatgttta 360
aaacatcadc tgtatgtata attgtttagc tgtaaacaaa tagtccaaat aattgtgtta 420
tggaatgta ttaattgtca tataatataa ttgcttgaa tttatcacca tgtgtttttg 480
tttgtttttt aacacagctg gaaagttgat ccatgggtaa ggacttctac catcattact 540
tgtgtatttt aatagtatta tcatcagtag tgttattaac aacttctctt ctatcgctga 600

ctctctccat cagactcac catcatggtt acgacgagca gcaggagctc gacaagcgcg 660
cagtcgatga 670

<210> 126
<211> 813
<212> DNA
<213> *Hippoglossus stenolepis*

<400> 126
atgaagtcca ctgccacctt cctggtgttg ttcatggtcg tcctcatggc tgaacctgga 60

gagggtttgg gaaattggat ggggccccat atcagcggta gagtcacgga attaatttgc 120
 ttttccatt gcaaataatt taatattgca tagctggaaa atcacgaaat aagtagtcga 180
 tatatttggc caaatagaat aactttgatt tcaataataa tcaaaattac aatcaaaaag 240
 gcctttgatt agcatgttcc ttcaataaaa tggacattga agtttattt gatgctcaca 300
 tgcaccgacc tgctgcggca acaattgaaa tcaaatttgc ctcagaattt aaagtacatt 360
 tttctaggtg attaatactt tccattcacc tgatttatt tataaatata gaataactgg 420
 atctttctgc taaaataata aaacacacat tctgatttta ccagtcaaga ttgaacacta 480
 cttaaaagta tgtataaaac atcatctgta tgtataattg ttaactgtt aacaatagtc 540
 caaataattg tgtaaggaa atgtattaat tgcatttaa tatcatttgc ttgaatttat 600
 caccatgagt ttttgtttg tttttacaca ggtagaaaga aggcttgca gtaaggactt 660
 ctaccatcat tactttgtaa tttttatagt attatcatca gtactgttat tgacaacttc 720
 tctgtctcg ctgactctct ccattcaggat gaactcagag cgtcgcagtt acgacgagta 780
 gcagcagaag ctcgacaagc gcgcagtcga tga 813

<210> 127

<211> 668

<212> DNA

<213> Hippoglossus stenolepis

<400> 127

atgaagtca ctgccacctt cctggtgttg ttcatggctg tctcatggc tgaacctgga 60
 gagtgtttt tgggattgct ttttcacggg gtccaccatg gtagggcac ggaagtaatt 120
 cgattttac atggcaaata ttttaagata acacaccata tgagtagtcg atatatttga 180
 tatattagaa tcactttgat ttcaataata atcaaaataa caatctctag gcgatttaat 240
 atttgcatta attggatttg ttttaaaaa tatagaataa ctggatcttt atggtaaaat 300
 aattaaacat acattctgat ttaccagtc aagattgaac actacttaga agtatgtata 360
 aaacatcacc tgtatgtata attgtttaac tgtaactaa tagtccaaat aattgtgtta 420
 tggaaatgta ttaattgtca ttaatatca ttgcttgaa tttatcacca tgtgttttg 480
 ttgttttta cacagttgga aatttgatcc atgggtaagg acttctacca tcattactgt 540
 gtatttttaa tagtattatc atcagtactg ttattgacaa cttctctgt ctcgctgact 600
 ctctccatca gactcatcca tcacggttac gacgagcagc aggagctcga caagcgcgca 660
 gtcgatga 668

<210> 128

<211> 1015

<212> DNA

<213> Pleuronichthys coenosus

<400> 128

gccacatttg tattcgcaag gtaatatcga tattttcaa actcatttag acgagaccag 60
 gcatttggga aacgtgctaa ggttgttact gtataatgca aaattaatga tctttattt 120
 tctgttttt ttgcagaat gaagttcact gccaccttcc tcatgattt aatcttcgtc 180
 ctcatggctg aacctggaga gtgtgggtatt aggaaatggt ttaaaaaggc tgctcacggc 240
 aaagtcacgg aattaatttg cttttgctt tacaaatatt ttttacagc agctggaaaa 300
 tcacaaaaat aaatagtcga tgtatttggc caattagaat cactttgatt tcaataataa 360
 tctaataatgc aacctaaaag gcctttgatt agcatgttcc ttcaatgaaa tgggtgttga 420
 gggttatttt gatttcaca tgcaccgacc tgctgcggca acaattgaat tcaaatttgc 480

cccaaaggaa ttcaaagtaa acttttctag gcgatttaat ctttcataa ctcggctttg 540
 ttttaaaaa tatataataa ctcaatcgct atgataaaat aataacacat acattctgat 600
 ttatacaaga caagattgaa aactcttga aagtatgtat caaacatcat ctgtttatat 660
 aattgtttaa cattcacaa aaagtccaac taattgtgtt atggaattgt ataaattgtc 720
 attaatata attttttga gtttatcaat atgtgtttt gttgtttta cacagtggc 780
 aagaaagttg gcaaggtggc ccttaagtaa ggacttctac cattattact gtataattt 840
 gatagtatta tcaccagtac tgttattgac aacttctctt ttctgtctga ctctctccat 900
 ccgactcatc tgcagtgtt accctggcga gcagcagcag ctcgacaagc gtgcagtcga 960
 tgaagagccc agtgttattg cttttgactg aaggagtcgc cttgaaggag ccttc 1015

<210> 129
 <211> 1019
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence of pleurocidin-like gene

<400> 129
 gccactttg tattcgcaag gtaatatcga ttttttcaa actcatttag acgagaccaa 60
 gcatttggga aacgtgctaa ggtgttact gtataatgca aaattaatga tctttattt 120
 tctgttttt ttgcagaat gaagttcact gccaccttcc tcatgattt aatcttcgtc 180
 ctcatggctg aacctggaga gtgtggtatt aggaaatggt ttaaaaaggc tgctcacggt 240
 aaagtcacgg aattaattg ctttttgctt tacaaaatat tttttatag cagctggaaa 300
 atcacaaaaa taaatagtcg atgtatttgg ccaattagaa tcactttgat ttcaataata 360
 atctaaatag caacctaaaa ggctttgat tagcatgttc cttcaatgaa atggatgtt 420
 aggtttattt tgattctcac atgcaccgac ctgctgcggc aacaattgaa ttcaaattg 480
 tcccaaagga attcaaagta aacttttcta ggcgatttaa tctttccata actcgggctt 540
 tgtttttaa aatatataat aactcaatcc ctatgataaa ataataacac atacattctg 600
 attatacaa gacaagattg aaaacttctt gaaagtatgt atcaaacatc atctgtttgt 660
 ataattgtt aacatttcac aaaaagtcca actagttgtg ttatggaatt gtataaattg 720
 tcatttaata taatttttt gagtttatca atatgtgtt ttgtttgtt tacacagttg 780
 gcaagaaagt tggcaagggt gcccttaagt aaggacttct accattatta ctgtataatt 840
 ttgatagtat taccaccagt actgtattg acaacttctc ttttctgt gactctctcc 900
 atccgactca tctgcagtgc ttaccttggc gagcagcagc agctcgacaa gcgtgcagtc 960
 gatgaagagc ccagtgttat tgcttttgac tgaagaagtc gcctgaagg agccttcag 1019

<210> 130
 <211> 832
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence of pleurocidin-like gene

<400> 130

aatgaagttc actgccacct tctcataga atggttcac ttcgtctca atgggttgaa 60
acctgaagaa gtgtggttg aaagaaagt gtttaaaaag gctactcac gtaaagtcac 120
ggaattaatt agcattttc ttgtcaaata tttttttat acagctcgaa aattcacaaa 180
aataaatagt cgatatatt ggccaattag aatcaccttg attcaataa taatctaaat 240
aacaacctaa aaggccttg attagcatgt tcttcaatg aaatggacgt tgaggttat 300
attgattctc acatgcaccg acctgctcg tcaacaattg aattcaaatt tgagaggaat 360
tcagcgtaaa ttttctagg cgattaatc tttccattac tcggatttg ttttaaatat 420
atagaataac tcaattgcta tgataaaata ataacacata cattcagatt ttacaagac 480
aagattgaaa acttcttaa ggtacgtata aaacatcac tgtatttata attgtttaac 540
atttaacaaa taatctact aattgtgta tggaaatga taaattgtaa tttatataa 600
tttctttag tttatcatta tttgttttg tttgtttta cacagtggc aagcatgtg 660
gcaaggcggc ccttgagtaa gaactctac catcattact gtataattt gatagtgtta 720
tcaccagtac tgtattgac aacttctct gtctgctga ctctctccat ccgactcac 780
cgcagtgtt acctcgcgga gaagcaagaa ctgcacaagc gcgcagtcga tg 832

<210> 131

<211> 670

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 131

atgaagtca ctgccacct cctggtgtg ttcattgctg tctcatggc tgaacctgga 60
gagggtttt tcggattgct tttcacggg atccaccatg gtagggcac ggaattaatt 120
agatgtttac atggcaaata ttttaagata acacaccata tgagtagtcg atatattga 180
ccaattagaa tcactttaat ttaataata atcacataa caatctctag gccattaat 240
ctttccatta atcggatttg ttttttaa tatagaataa ctggatctt atgctaaaat 300
aatgaaacat acattctgat ttaccagtc aagattgaac gttacttaa agtatgtta 360
aaacatcac tgtatgtata attgtttagc tgtaacaaa tagtccaaat aattgtgta 420
tggaaatga ttaattgtca tataatataa tttgttgaa tttatacca tgtgttttg 480
ttgttttt aacacagctg gaaagttgat ccatgggtta ggactctac catcattact 540
gtgtatttt aatagtatta tcacagtac tgtattaac aacttctct ctatcgctga 600
ctctctccat cagactcac catcatggtt acgacgagca gcaggagtc gacaagcgcg 660
cagtcgatga 670

<210> 132

<211> 813

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 132

atgaagtca ctgccacctt cctggtgttg ttcattggtcg tctcatggc tgaacctgga 60
gagggtttgg gaaattggat ggggccccat atcagcggta gagtcacgga attaatttgc 120
ttttccatt gcaaatattt taatattgca tagctggaaa atcacgaaat aagtagtcga 180
tatatttggc caaatagaat aactttgatt tcaataataa tcaaaattac aatcaaaaag 240
gcctttgatt agcatgttcc ttcaataaaa tggacattga agttttttt gatgctcaca 300
tgcaccgacc tgcctcgggca acaattgaaa tcaaatttgt ctcagaattt aaagtacatt 360
tttctagtg atttaattt tccattcatc tgattttt tataaatata gaataactgg 420
atctttctgc taaaataata aaacacacat tctgatttta ccagtcaaga ttgaacacta 480
cttaaaagta tgtataaac atcatctgta tgtataattg tttaactgtt aacaatagtc 540
caaataattg tgttaaggaa atgtattaat tgcatttaa tatcatttgc ttgaatttat 600
caccatgagt ttttgtttg tttttacaca ggtagaaaga aggcttgca gtaaggactt 660
ctaccatcat tactttgtaa tttttatagt attatcatca gtactgttat tgacaacttc 720
tctgtctcg ctgactctct ccatcaggat gaactcagag cgtcgcagtt acgacgagta 780
gcagcagaag ctcgacaagc gcgcagtcga tga 813

<210> 133

<211> 668

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 133

atgaagtca ctgccacctt cctggtgttg ttcattggtcg tctcatggc tgaacctgga 60
gagtgtttt tgggaltgct ttttcacggg gtccaccatg gtagggtcac ggaagtaatt 120
cgattttac atggcaaata tttaagata acacaccata tgagtagtcg atatatttga 180
tatattagaa tcactttgat ttcaataata atcaaaataa caatctctag gcgatttaat 240
attgcatta attggatttg ttttaaaaa tatagaataa ctggatcttt atggtaaaat 300
aattaaacat acattctgat ttaccagtc aagattgaac actacttaga agtatgtata 360
aaacatcatc tgtatgtata attgttaac tgttaactaa tagtccaaat aattgtgtta 420
tggaaatgta ttaattgtca tttaatatca ttgcttgaa tttacacca tgtgttttg 480
ttgttttta cacagttgga aatttgatcc atgggtaagg acttctacca tcattactgt 540
gtatttttaa tagtattatc atcagtactg ttattgacaa cttctcttgt ctcgctgact 600
ctctccatca gactcatcca tcacggttac gacgagcagc aggagctcga caagcgcgca 660
gtcgatga 668

<210> 134

<211> 1015

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 134

gccacattg tattcgcaag gtaatatcga tattttcaa actcatttag acgagaccag 60
gcattggga aacgtgctaa ggtgttact gtataatgca aaattaatga tctttattt 120
tctgttttt ttgcagaat gaagtcact gccaccttc tcatgattt aatcttcgtc 180
ctcatggcg aacctggaga gtgtggtatt aggaaatggt ttaaaaaggc tgctcacggt 240
aaagtcacgg aattaattg cttttgctt tacaaatatt ttttacagc agctggaaaa 300
tcacaaaaat aaatagtcga tgtattggc caattagaat cactttgatt tcaataataa 360
tctaaatagc aacctaaaag gcctttgatt agcatgttcc tcaatgaaa tgggtgtga 420
ggtttattt gatttcaca tgcaccgacc tgctgcggca acaattgaat tcaaattgt 480
cccaaaggaa tcaaagtaa actttctag gcgatttaac cttccataa ctcggtttg 540
ttttaaaaa tatataataa ctcaatcgt atgataaaat aataacacat acattctgat 600
ttatacaga caagattgaa aactcttga aagtatgtat caaacatcat ctgtttat 660
aattgttaa cattcacaa aaagtccaac taattgtgt atggaattgt ataaattgtc 720
attaatata attttttga gttatcaat atgtgtttt gttgtttta cacagttggc 780
aagaaagtg gcaagggtgc ccttaagtaa ggactctac cattattact gtataattt 840
gatagtatta tcaccagtac tgtattgac aacttctt ttctgtctga ctcttccat 900
ccgactcgc tgcagtgtt acctggcgca gcagcagcag ctgcacaagc gtgcagtcga 960
tgaagagccc agtgtattg cttttgactg aaggagtcgc ctgaaggag ccttc 1015

<210> 135

<211> 557

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 135

cgcccttaag atgaagacat tcagtgtgc agttgcagtg gtggctgtcc tcgcatgtat 60
gttcatcctt gaaagcaccg ctgttcctt ctccgagggt cgaacggagg aggttgaaag 120
cattgacagt ccagtgggg aacatcaaca gccgggcggc acgtccatga atctgccggt 180
acgttcaatt tagtgaatga attaagtaac tacctttagc aaattaacat ctaagtgggt 240
gcgttcacc ctggaattg aattagccca ctacgctag ttgttaacca ttgattgtg 300
agccggtaga gagggcttca gggcgagtag tgtgaatact tgtgaagtgg agacttggac 360
aaaaatactt accatgtgct tgttccacc ttttcattt tctttcttg gctgagatac 420
agatgcattt caggttcaag cgtcagagcc acctctccct gtgccgttgg tgctgcaact 480
gctgtcacia caagggctgt ggcttctgct gcaaattctg aggacctgcc agcaaagggc 540
gaattcgttt aaaacac 557

<210> 136

<211> 282

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide

sequence for hepcidin-like gene

<400> 136

agatgaagac attcagtgtt gcagttgcag tgggtggtcgt cctcgcatgt atgttcatcc 60
ttgaaagcac cgtgttctt ttctccgagg tgcgaacgga ggaggttgaa agcattgaca 120
gtccagttgg ggaacatcaa cagccgggcg gcacgtccat gaatctgccg atgcattca 180
ggttcaagcg tcagagccac ctctccctgt gccgttggtg ctgcaactgc tgcacaaca 240
agggtgtgg cttctgctgc aaattctgag gacctgccag ca 282

<210> 137

<211> 623

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 137

acgaggtccc tcacccgtg acacaaaag aacaatcaat caactttgga ctgctcttag 60
tgcattgaaa attgtgcgtt ggagagcgtc gctttttggg aacattgaag agttctgac 120
ttctcataa actgtcactt caatttcaac tgatttcaac aggactttta aataggctat 180
aaacttcta aaaaaaacga gaatgaaggc ctttagtggt gcagtggtag tegtattgc 240
atgtatgttc atccttgaag gcaccgctgt tcctttctcc gaggtgcgaa cggaggaggt 300
tggaagcttt gacagtccag ttggggaaca tcaacagccg ggcggcgagt ccatgcatct 360
gccggagcct ttcaggttca agcgtcagat ccacctctcc ctgtgcggtt tgtgctgcaa 420
ctgctgtcac aacattggct gtggcttctg ctgcaaattc taaggacctg cccgcaacat 480
tttctagttt gtacatgttt gcaatgtttt cttctgaga tgttgtttt gtgactatga 540
taatgattta taaaatcact tcttattgtg acactttaa aaaaataaac acattctttg 600
aatacaaaaa aaaaaaaaaa aaa 623

<210> 138

<211> 312

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 138

cgaacggagg aggttgaaag cattgacagt ccagttgggg aacatcaaca gccgggaggc 60
acgtccatga atctgccgat gcatttcagg tcaaacgctc agagccacct ctccctgtgc 120
cgttggtgct gcaactgctg tcacaacaag ggctgtggct tctgctgcaa attctgagga 180
cctgccagca ctaaagccat ttattaaact tatcgctttt aatttgcccc tattcttcta 240
tgtttctttt ggactctgtg gagaagatgc aatctcattg acgtctttat cactgcacaa 300
cctcaatctt gt 312

<210> 139
<211> 277
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 139
aagatgaaga cattcagtgt tgcagtggta cccgtcattg catgtatgtt catccttgaa 60
agcaccgctg ttcctttctc cgaggtgcca acggaggagg ttggaagctt tgacagtcca 120
gttggggaac atcaacagcc gggcggcacg tccatgaatc tgccgatgca ttccaggttc 180
aagcgtcaga gccacctctc cctgtgccgt tgggtcttca actgctgtca caacaaaggc 240
tgtggcttct gctgcaaatt ctgaggacct gccagca 277

<210> 140
<211> 276
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 140
taagatgaag caattcagtg tggcagtggg actcgtcatg gcatgtatgt tcacgtgga 60
aagcaccgct gttcctttct ccgaggtgcg aacggaggag gttggaagct tggacagtcc 120
agttggggaa catcaacagc cgggcggcga gtccatgcat ctgccggagc cttcaggtt 180
caagcgtcag atccacctct cctgtgctgg ttgtgctgc aactgctgtc acaacattgg 240
ctgtggcttc tgtgcaaatt tctgagactg ccagca 276

<210> 141
<211> 647
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 141
acgaggcaca cgtgaccag ggggtcacca caacttctga agagaccag gttcctagag 60
agccactaga gaatcacccg ggagcccgaa gaacacagga cgctgcggtg ctcgtcggtg 120
gccggacacc catgagacag aagacctaca agcctctcag cttcagaagg atttctgac 180
tcagcatcta aaacctccct caaaatgaag gcattcagca ttgcagttgc agtgacactc 240
gtgctgcct ttgtttgcat tcagtgcagc tctgccgtcc cattccaagg ggtgcaggag 300

ctggaggagg ccgggggcaa tgacactcca gttgcggaac atcaagtgt gtcaatggaa 360
tcttgatgg agaatccac caggcagaag cgccacatca gccacatctc cctgtgccgc 420
tggtgctgca actgctgcaa ggccaacaag ggctgtggct tctgctgcaa gttctgagga 480
ttcccgaac acaacctcac aatgtattaa ttattacac ttttgcga gaaatgtcct 540
ttttctgac ctcttttgta attttgtata atcttttaa taaaacgggg tacgattcat 600
ggaaaaaacc ctttgaataa aataaaaaaa aaaaaaaaaa aaaaaaac 647

<210> 142

<211> 521

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 142

aagatgaaga cattcagtgt tgcagttgca gtgacactcg tgctcgcctt tgttgcatt 60

caggacagct ctgccgtccc attccagggg gtaagaacgc aactttaact cgcttcattt 120
gcttattagc cataaatgtt ttgtcaggat gctgagacac ggctcctaaa tgtgtataat 180
tcattaacag gtgcaggagc tggaggaggc aggggggcaat gacactccag ttgcggcaca 240
tcaaatgatg tcaatggaat cgtggatggg atgttcaatc tgttcaatcg actggatgaa 300
ttaagccaat tactgtgagc gcgttaacat ttaagtggct gtgttcagc ccggtgctgt 360
agggaataaa acccctcgtt catgtgtctt gtccgtccac aggagagtcc cgtcaggcag 420
aagcgtcaca tcagccacat ctccatgtgc cgctgggtgt gcaactgctg caaggccaag 480
ggctgtggcc cctgctgcaa attctgagga cctgccccagc a 521

<210> 143

<211> 543

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 143

aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tattgtatc 60
cagcagagct ctggcacctt tctgaggta agctcctgac ttcatatcgt ttattttgc 120
ttgtatcca tgaatctctc atcaacagac tgagacttga ttcttcttt atcaggtaca 180
agagctggag gaggcagtga gcaatgacaa tgcagctgct gaacatcagg agacatcagt 240
ggactcatgg atggtaggtt cagttcactg aatggatcaa accaattcac atcagacctt 300
tcagatggaa gtgaatgtgt ttagtctca aaggtgccct gaagctcagt ttacacaagc 360
agtgaanaa aacacagaaa gttatgatga tgctgatgaa cttctctca tgtctcatgt 420
ctctcacaca gatgccatc aacagacaga agcgtgcctt caagtgaag ttctgctgcg 480
gctgctgcag agctggtgtc tgtggactgt gctgcaagtt ctgaggattc ctgctccaac 540
aac 543

<210> 144
<211> 581
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 144
acgagctgac aggagctgac aggagtcacc agcagagtca aagaactaaa caacttaact 60
cagtcaaact ctcaaagatg aagacattca gtgttcagc cagctggcc gtcgtcctcg 120
tctttatttg tatccagcag agctctgcct ctttcctga ggcacaagag ctggaggagg 180
cagtgagcaa tgacaatgca gctgctgagc atcaggagac accagtgac tcgtggatga 240
tgccatacaa cagacagaag cgtagcttta agtgtaagtt ctgctgcggc tgctgcagag 300
ctgggtgtcg tggactgtgc tgcaagttct gaggattcct gctccaacaa ccatcaaata 360
ttcatttggt ttgccttttg tcttaaagtt cattgaacta taaacatatt tctggttgag 420
catgtgatag ttaaatgggt ttactcattg gtcatggta tagtcaagtg ttcagagatg 480
tgattgtatc accacatat tttctgtgt aggtgtattt tcaataaatg ccaatgatcc 540
tttgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 581

<210> 145
<211> 579
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 145
acgagcggca cgaggtgaac tgacaggagc tgacaggagt caccagcaga gtcaaagaac 60
taaacaactt aactcagtca aactctcaa gatgaagaca ttcagtgttg cagtcacagt 120
ggccgtctgt ctcgtcttta tttgtatcca gcagagctct gcctccttc ctgaggcaca 180

agagctggag gaggcagtga gcaatgacaa tgcagctgct gaacatcagg agacaccagt 240
tgactcgtgg atgatgcaa acaacagaca gaagcgtggc ttaagtgtg agttctgtg 300
cggtctgtgc agagctgggt tctgtggact gtgctgcaag ttctgaggat tctgtctcca 360
acaacatca aatattcatt tgttttcct tttgtttta agttcattga actatataca 420
tatttctggt agagcatgtg atagttaat ggtgctactc cttggttcat ggtgtagta 480
agtgttcaga gatgtgattg tatcaccac atatttctct gttaagggtg attttcaata 540
aatgttaatg ctcctttgaa aaaaaaaaaa aaaaaaaaaa 579

<210> 146
<211> 477
<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 146

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acgagactga caggagctga caggagtcac cagcagagtc aaagaactaa acaacttaac 60
tcagtcaaac tctcaaagat gaagacattc agtggtgcag tcacagtggc cgctcgtgctc 120
gtctttattt gtatccagca gagctctgcc accttcctg agatgccata caacagacag 180
aagcgtggct ttaagtgtaa gttctgctgc ggctgctgcg gagctgggtg ctgtggaatg 240
tgctgcaagt tctgaggatt cctgctccaa caaccatcaa atattcattt gtttgcctt 300
ttgtcttaaa gttcattgaa ctataacat atttctggtt gagcatgtga tagttaatg 360
gtgttactca ttggttcatg gtatagtcaa gtgttcagag atgtgattgt atcaccaca 420
tattttctct gttagggtga tttcaataa atgccaatga tccttgaaa aaaaaaa 477
```

<210> 147

<211> 483

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 147

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aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tattgtatc 60
cagcagagct ctgcctcctt tctgaggta agcacctgac ttcagatcgt ttcatttgc 120
tggtatccat gaatctctca tcatactact gagacttgat tccttcttta tcaggcacia 180
gagctggagg aggcagtgag caatgacaat gcagctgctg agcatcagga gacaccagt 240
gactccagga gtgaatgtgt ttagtcaca aaagtgcctt gaagctcagt ttacacaagc 300
agagaaaaca aacagagtaa gttatgatga tgctgatgaa ggtctcctca tgtctcatgt 360
ctctcacaca gattccatac aacagacaga agcgtagctt taagtgaag ttctgctgcg 420
gctgctgcag agctgggtgc tgtggactgt gctgcaagtt ctgaggattc ctgctccaac 480
aac 483
```

<210> 148

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 148

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agatgaagac atgcagtgtt gcagtcacag tggccgtcgt gctcgtcttt attgtatcc 60
agcagagctc tgctccttt cctgaggtaa gcacctgact tcagatcgtt tcatttgctt 120
```

gttatccatg aatctctcat catcatactg agacttgatt ccttctttat caggtacaag 180
agctggagga ggcagtgagc aatgacaatg cagctgctga acatcaggag acaccagtg 240
actcgtggat ggtaggttca gttcactgaa tggatcaatc catttcacat cagatcttc 300
agatggaagt gaatgtgtt tagtcacaaa agtgccctg aagctcagtt tacacaagca 360
gagaaaacaa acagagtaag ttatgatgat gctgatgaag gtctcctcat gtctcatgtc 420

tctcacacag atgccaaaca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctgggtgtct gtggactgtg ctgcaagttc tgaggattcc tgctccggac 540
aa 542

<210> 149
<211> 536
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 149
aagatgaaga caatcagtgt tgcagtcaca gtggccgtcg tctcgtctt tattgtatc 60
cagcagagct ctgcctcctt tctgaggta agcacctgac ttcagatcgt ttaattgct 120
tggtatccat gaatctctca tcaacatact gagacttgat tcttcttta tcaggcacia 180
gagctggagg aggcaagtga caatgacaat gcagctgctg agcatcagga gacaccagtg 240
gactcagga tggtaggttc agttcactga atggatcaat ccatttcaca tcagatcttt 300
cagattgaag tgaatgtgtt ttagtcacaa aagtgcctg aagctcagtt tacacaagca 360
gagaaaacaa acagagtaag ttatgatgat gctgatgaag gtctcctcat gtctcatgtc 420
tctcacacag attccataca acagacagaa gcgtagcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctgggtgtct gtggactgtg ctgcaaattc tgaggacctg ccagca 536

<210> 150
<211> 536
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 150
aagatgaaga cattcagtgg tgcagtcaca gtggccgtcg tgctcgtctt tattgtatc 60
cagcagagct ctgcctcctt tctgaggta agcacctgac ttcagatcgt tcatttgct 120
tggtatccat gaatctctca tcatcatact gagacttgat tcttcttta tcaggtaaa 180
gagctggagg aggcaagtga caatgacaat gcagctgctg aacatcagga gacaccagtt 240
gactcgtgga tggtaggttc agttcactga atggatcaat ccatttcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctg aagctcagtt tacacaagca 360
gagaaaacaa acagagtaag ttatgatgat gctgatgaag gtctcctcat gtctcatgtc 420
tctcacacag atgccaaaca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480

ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggacctg ccagca 536

<210> 151

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 151

aagatgaaga catcagtggg tgccagtcaca gtggccgctg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatagc ttatttgct 120
tggtatccat gaattctca tcaacatact gagactttat tcttcttta tcaggtaca 180
gagctggagg aggcagttag caatgacaat gcagctgctg cgcacagga gacatcagt 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag cgaatgtgtt ttagtcaaaa aagtgcctg atgctcagt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgc 420
tctcacacag atgcatata acagaccgaa gcgtagcttt aagtgtaat tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggattcc tgctccaaca 540
ac 542

<210> 152

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 152

aagatgaaga cattcagtgt ggcagtcaca gtggccgctg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatagc ttatttgct 120
tggtatccat gaattctca tcaacatact gagacttgat tcttcttta tcaggtaca 180
gagctggagg aggcagttag caatgacaat gcagccgctg aacacagga gacatcagt 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacag aagtgcctg atgctcagt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgc 420
tctcacacag atgcatata acagaccgaa gcgtagcttt aagtgtaat tctgctgcgg 480
ctgctgtaga gctggtgtct gtggactgtg ctgcaaattc tgaggattcc tgctccaaca 540
ac 542

<210> 153

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 153

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aagatgaaga cattcgtggt tgcagtcaca gtggccgctg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatagc ttcatgtgt 120
tggtatccat gaatctctca tcaacatact gagacttgat tcttcttta tcaggtacaa 180
gagctggagg aggcagtgag caatgacaat gcagccgctg aacatcagga gacatcagt 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgactgtgtt ttatgcacaa aagtgccttg atgctcagtt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tctcacacag atgccataca acagacagaa gcgtagcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctgggtgtc gtggactgtg ctgcaaattc tgaggattcc tgctccaaca 540
ac                                     542
```

<210> 154

<211> 533

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 154

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aagatgaaga catcagtggt tgcagtcaca gtggccgctg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatagc ttcatgtgt 120
tggtatccat gaatctctca tcaacatact gagactttat tcttcttta tcaggtacaa 180
gagctggagg aggcagtgag caatgacaat gcagctgctg cacatcagga gacatcagt 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatgaagt gactgtgttt tagtcacaaa agtgcctga tgctcagttt acacaagcag 360
agaaaacaag cagagtaagt tatgatgatg ctgatgaacg tgctcctcatg tctcatgtct 420
ctcacacaga tgccatacaa cagacataag cgtagcttta agtgttaagt ctgctgcggc 480
tgctgcagag ctggtgtctg tggactgtgc tgcaaattct gaggattcct gct      533
```

<210> 155

<211> 541

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 155

aagataagac attcagtgtt gcagtcacag tggccgtcgt gctcgtcttt atttgatcc 60
agcagagctc tgccaccttt cctgaggtaa gcacctgact tcagatcgtt tcatttgctt 120
gttagccttg aatctctcat caacatactg agacttgatt tcttctttat caggtagaag 180
agctggagga ggcagtgagc aatgacaatg cagctgctga acatcaggag acatcagtgg 240
acttggtgat ggtaggttca gtccactgaa tggatcaaac caattcacat cagatcttc 300
agatggaagt gaatgtgttt tagtcacaaa agtgccttga agctcagttt acacgagcag 360
agaaaaccaa cacagtaagt tatgatgatg ctgatgaacg tctcctcatg tctcatgtct 420
ctcacacaga tgccatacaa cagacagaag cgtggcttta agtgtaagt ctgctgcggc 480
tgctgcagcc ctggtgtctg tggacttgc tgcagattct gaggattcct gctccaaca 540
c 541

<210> 156

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 156

aagatgaaga cattcagtgt tgcagtcgca gtggccgtcg tgctcatctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatagt ttcatttgct 120
tggtatccat gaatctctca tcaacatact gagactttat tcttcttta tcaggtagaa 180
gagctggagg aggcagttag caatgacaat gcagctgctg aacatcagga gacatcattg 240
gactcatgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgactgtgtt ttagtcacaa aagtgccttg atgctcagtt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgtc 420
tctcacacag atgccataca acagacagaa gcgtggcttt aagtgaagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaatc tgaggacctg ccagca 536

<210> 157

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 157

aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatagt ttcatttgct 120
tggtatccat gaatctctca tcaacatact gagactttat tcttcttta tcaggtagaa 180
gagctggagg aggcagttag caatgacaat gcagctgctg aacatcagga gacatcattg 240

gactcatgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
 cagatggaag tgaatgtgtt ttatgcacaa aagtgccctg atgctcagtt tacacaagca 360
 gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgtc 420
 tctcacacag atgccataca acagacataa gcgtagcttt aagtgttaagt tctgctgcgg 480
 ctgctgcaga gctgggtgtc ttggactgtg ctgcaaattc tgaggacctg ccagca 536

<210> 158
 <211> 535
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

<400> 158
 agatgaagac attcagtgtt gcagtcacag tggccgtcgt gctcgtcttt attgtatcc 60
 agcagagctc tgccaccttt cctgaggtaa gcacctgact tcagatagtt tcatttgctt 120
 gttatccatg aatctctcat caacatactg agacttgatt tcttctttat caggtacaag 180
 agctggggga ggcagtgagc aatgacaatg cagccgctga acatcaggag acatcagtgg 240
 actcgtggat ggtaggttca gttcactcaa tggatcaaac caattcacat cagatctttc 300
 agatggaagt gaatgtgtt tagtcacaaa agtgcctga tgctcagttt acacaagcag 360
 agaaaacaag cagagtaagt tatgatgatg ctgatgaacg tgtcctcatg tctcatgtct 420
 ctcacacaga tgccatacaa cagaccgaag cgtagcttta agtgttaagt ctgctgcggc 480
 tgctgcagag ctggtgtctg tggactgtgc tgcaaattct gaggacctgc cagca 535

<210> 159
 <211> 277
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

<400> 159
 aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcatctt tattgtatc 60
 cagcagagct ctgccacctc tctgaggta caagggtgagg aggaggcagt gagcaatgac 120
 aatgcagctg ctgaacatca ggagacatca gtggactcgt ggatgatgcc atacaacaga 180
 cagaagcgtg gctttaagtg taagtctgc tgcggctgct gcaggcctgg tgtctgtgga 240
 ctttgctgca gatcctgagg attcctgctc caacaac 277

<210> 160
 <211> 542
 <212> DNA
 <213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 160

aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
gagctggagg aggcagttag caatgacaat gcagctgctg aacatcagga gacatcagt 240
gacttggtga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctg aagctcagtt tacacgagca 360
gagaaaacca acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgic 420
tctcacacag atgccataca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga cctgggtgct gtggactttg ctgcagattc tgaggattcc tgctccaaca 540
ac 542

<210> 161

<211> 539

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 161

aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
gagctggagg aggcagttag caatgacaat gcagctgctg aacatcagga gacatcagt 240
gacttggtga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctg aagctcagtt tacacgagca 360
gagaaaacca acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgic 420
tctcacacag atgccataca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcagt cctgggtgct gtggactttg ctgcagattc tgaggattcc tgctccaac 539

<210> 162

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 162

aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120

tgttagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
 gagctggagg aggcagtgag caatgacaat gcagctgctg aacatcagga gacatcagt 240
 gactcgtgga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcctt 300
 cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacgagca 360
 gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
 tctcacacag atgccataca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
 ctgctgcagt cctggtgtct gtggactttg ctgcaaattc tgaggacctg ccagca 536

<210> 163
 <211> 536
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

<400> 163
 aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgatc 60
 cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
 tgttagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
 gagctggagg aggcagtgag caatgacaat gcagctgctg aacatcagga gacatcagt 240
 gactcgtgga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
 cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacgagca 360
 gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
 tctcacacag atgccataca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
 ctgctgcaga cctggtgtct gtggactttg ctgcaaattc tgaggacctg ccagca 536

<210> 164
 <211> 271
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

<400> 164
 aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgatc 60
 cagcagagct ctgccacctt tctgaggta caagagctgg aggaggcagt gagcaatgac 120
 aatgcagctg ctgaacatca ggagacatca gtggactcgt ggatgatgcc atacaacaga 180
 cagaagcgtg gctttaagtg taagtctgc tgcggctgct gcagacctgg tgtctgtgga 240
 ctttgctgca aattctgagg acctgccagc a 271

<210> 165
 <211> 277
 <212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 165

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aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tattgtatc 60
cagcagagct ctgccacctt tctgaggta caagagctgg aggaggcagt gagcaatgac 120
aatgcagctg ctgaacatca ggagacatca gtggactcgt ggatgatgcc atacaacaga 180
cagaagcgtg gctttaagtg taagttctgc tgcggctgct gcaggcctgg tgtctgtgga 240
ctttgctgca gattctgagg attctgctc caacaac 277
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<210> 166

<211> 499

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 166

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aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt cattgtatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttctcttta tcaggtacaa 180
gagctggagg aggcaagtga cagtgacaat gcagctgctg aacatcagga gacatcagt 240
gactcgtgga tggtagggtc agttcactga atgtgttta gtcacaaaag tgccctgaag 300
ctcagtttac acaagcagag aaaacaaaca gagtaagtta tgatgatgct gatgaacgct 360
tcctcatgct tcattgtctt cacacagatg ccatacaaca gacagaagcg tagctttaag 420
tgcaagttct gctgcggctg ctgcagacgt ggtgtctgtg gactgtgctg caaattctga 480
ggattcctgc tccaacaac 499
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<210> 167

<211> 549

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 167

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aagatgaaga ctatcagtgt tgcagtcaca gtggccgctg tgctcctctt cattgtacc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttctcttta tcaggtacaa 180
gagctggagg aggcaagtga cagtgacaat gcggctgctg aacatcagga gacatcagt 240
gactcgtgga tggtagggtc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
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cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacaagca 360
 gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
 tcatgtctct cacacagatg ccatacaaca gacagaagcg tggctttaag tgcaagttct 480
 gctgcggtg ccgctgtggt gctctctgtg gactgtgctg caaattctga ggattcctgc 540
 tccaacaac 549

<210> 168

<211> 543

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

<400> 168

aagatgaaga cattcagtg tgcagtcaca gtggccgtcg tgctcgtctt catttgatc 60
 cagcagagct ctgccacctt tctgaggta agcacctgac tcagatcgt tcatttgct 120
 tgtagcctt gaattctca tcaacgtact gagacttgat ttctcttta tcaggtacaa 180
 gagctggagg agccagttag cagtgacaat gcagctgctg aacatcagga gacatcggtg 240
 gactcgtgga tgtaggttc agttactga atggatcaaa ccaattcaca tcagatcttt 300
 cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacaagca 360
 gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
 tcatgtctct cacacagatg ccatacaaca gacagaagcg tggctttaag tgcaagttct 480
 gctgcggtg ccgctgtggt gctctctgtg gactgtgctg caaattctga ggacctgcca 540
 gca 543

<210> 169

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

<400> 169

aagatgaaga cattcagtg tgcagtcaca gtggccgtcg tgctcgtctt tattgttcc 60
 agcagagctc tgccaccttt cctgaggtaa gcacctgact tcagatcgtt tcatttgctt 120
 gtagccttg aattctcat caacatactg agacttgatt tctctttat caggtacaag 180
 agctggagga ggcagtgagc agtgacaatg cagctgctga acatcaggag acatcagtg 240
 actcgtggat ggtaggttca gttccctgaa tggatcaaac caattcacat cagatcttcc 300
 agatggaagt gaatgtgtt tagtcacaaa agtgcctga agctcagttt acacaagcag 360
 agaaaacaaa cacagtaagt tatgatgatg ctgatgaaca tctctcatg tctcatgtct 420
 catgtctctc acacagatgc catacaacag acagaagcgt ggctttaagt gcaagttctg 480
 ctgcggtgc cgctgtggtg ctctctgtgg actgtgctgc aaattctgag gacctgccag 540
 ca 542

<210> 170
<211> 655
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 170
acgagctgac aggagctgac aggagtcacc agcagagtca aagaactaaa caacttaact 60
cagtcaaaact ctcaaagatg aagacattca gtgttcgagt cacagtggcc gtcgtgctcg 120
tctttatttg tatccagcag agctctgcc ctttcctga ggtacaagag ctggaggagg 180
cagtgagcaa tgacaatgca gctgctgagc atcaggagac accagtggac tcagggatga 240
tgccaaacaa cagacagaag cgcagcgccg attgttgcc atgttgcaat caaatggct 300
gtggaacttg ctgaaggct taaacagact ctgggcaga tcaatccagg ttcgtcttc 360
gtgtctctc cgtggagtgc aaccagagac cttctcagcc catagtccaa gttctgcc 420
ctagaccacc gcctctcct catcaaatc tcaatgttt tcatttgc ttaaagttca 480
ttgaactata aacatatttc tgtagagca tgtgatagt taatgggtt actcattgg 540
tcattgtata gtcagatgt cagagatgt attatatcat ccacatatt tctctgtta 600
gggtactgt caataatgt caatgctct ttgaaaaaa aaaaaaaaaaaa aaac 655

<210> 171
<211> 510
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 171
cgtgctcgtc ttattttgta tccagcagag ctctgccacc ttcttgagg tgagctcctg 60
acttcagatc gtttcatfta gcttgtatc catgaatctc tcatcaacat actgagactt 120
gaatccttct ttatcaggta caggagctgg aggaggcagt gagcaatgac aatgcagctg 180
ctgaacatca ggagacatca gtggactcat ggatggatg ttcagttcac tgaatggatc 240
aaaccaatc acatcagatc ttcatagatg aagtgaattt gtttagtcc caaaagtgc 300
ctgaagctca gtttacacaa gcagagaaaa acaaacaca gtaagttag atgatgctga 360
tgaacgtctc ctcatgtctc atgtctctca cacagatgcc atacaacaga cagaagcgca 420
gcgccgagtg tagcttctgc tgcaatgaat ctggctgtgg aatttgctgc aaattctgag 480
gattcctgct ccaacaacaa ggcgaattc 510

<210> 172
<211> 530
<212> DNA
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 172

aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggtg agctcctgac ttcagatcgt ttcatttagc 120
ttgttatcca tgaatctctc atcaacatac tgagacttga atccttcttt atcaggtaca 180
ggagctggag gaggcagtga gcaatgacaa tgcagctgct gaacatcagg agacatcagt 240
ggactcatgg atggtatggt cagttcactg aatggatcaa accaattcac atcagatctt 300
tcagatggaa gtgaatttgt tttagtcacca aaagtgcctt gaagctcagt ttacacaagc 360
agagaaaaac aaaacacagt aagttatgat gatgctgatg aacgtctcct catgtctcat 420
gtctctcaca cagatgccat acaacagaca gaagcgcagc gccgagtga gcttctgctg 480
caatgaatct ggctgtggaa tttgctgcaa attctgagga cctgccagca 530

<210> 173

<211> 348

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 173

gtggaggagc cagtgagcag tgagaatgga gcaaatgaac acacataaga tctttcggat 60
ggaagtgtat gtgttttagt cacatgagtg gctcgaagct cagtacacac gagcagagag 120
aacgaacaca gtgtgtttta ttctgcttgt gtaaactgag cttcagttta cacaagcaga 180
gaaaacaaac acagtaagtt atgatgatgc tgatgaacgt ctctcatgt ctcatatctc 240
tcacacagat gccaaacaac agacagaagc gtggctctaa ttgcaaacca tgctgcaatc 300
ataatggctg tggaacgtgc tgcgaagtct gaggattcct gctccaca 348

<210> 174

<211> 88

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 174

Met Lys Thr Phe Ser Val Ala Val Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 175

<211> 88

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 175

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 176

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 176

Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 177

<211> 58

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 177

Arg Thr Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln
1 5 10 15

Gln Pro Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys
20 25 30

Arg Gln Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His
35 40 45

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
50 55

<210> 178

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 178

Met Lys Thr Phe Ser Val Ala Val Val Pro Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln Ser His
50 55 60

Leu Ser Leu Cys Arg Trp Cys Phe Asn Cys Cys His Asn Lys Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 179

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 179

Met Lys Gln Phe Ser Val Ala Val Val Leu Val Met Ala Cys Met Phe
1 5 10 15

Ile Val Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Leu Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 180
<211> 90
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 180
Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15

Val Cys Ile Gln Cys Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Glu His Gln Val
35 40 45

Met Ser Met Glu Ser Trp Met Glu Asn Pro Thr Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
85 90

<210> 181
<211> 89
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 181
Met Lys Thr Phe Ser Val Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15

Val Cys Ile Gln Asp Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Ala His Gln Met
35 40 45

Met Ser Met Glu Ser Trp Met Glu Ser Pro Val Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Met Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Lys Gly Cys Gly Pro Cys Cys Lys Phe
85

<210> 182

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 182

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Gly Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ala Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 183

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide

sequence

<400> 183

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 184

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 184

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 185
<211> 58
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 185
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Met Pro Tyr Asn
20 25 30
Arg Gln Lys Arg Gly Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Gly
35 40 45
Ala Gly Val Cys Gly Met Cys Cys Lys Phe
50 55

<210> 186
<211> 83
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 186
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Pro Val Asp Ser Arg Ile Pro Tyr Asn Arg Gln Lys Arg Ser Phe Lys
50 55 60
Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu Cys
65 70 75 80

Cys Lys Phe

<210> 187

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 187

Met Lys Thr Cys Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 188

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 188

Met Lys Thr Ile Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45 .

Pro Val Asp Ser Gly Met Ile Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 189

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 189

Met Lys Thr Phe Ser Gly Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 190

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide

sequence

<400> 190

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 191

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 191

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 192
<211> 84
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 192
Met Lys Thr Phe Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 193
<211> 84
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 193
Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 194

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 194

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 195

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 195

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 196

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 196

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg His Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 197

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 197

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Gly Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 198

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 198

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Gly Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu

65 70 75 80

Cys Cys Arg Ser

<210> 199

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 199

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 200

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 200

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 201

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 201

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 202

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 202

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 203

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 203

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 204
<211> 84
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 204
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Arg Phe

<210> 205
<211> 84
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 205
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Arg Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 206

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 206

Met Lys Thr Ile Ser Val Ala Val Thr Val Ala Val Val Leu Leu Phe
1 5 10 15

Ile Cys Thr Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Ala Leu Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 207

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 207

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Pro Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Ala Leu Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 208

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 208

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Ala Leu Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 209
<211> 81
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 209

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Gly Met Met Pro Asn Asn Arg Gln Lys Arg Ser Ala
50 55 60

Asp Cys Trp Pro Cys Cys Asn Gln Asn Gly Cys Gly Thr Cys Cys Lys
65 70 75 80

Val

<210> 210
<211> 81
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 210

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60

Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80

Phe

<210> 211

<211> 81

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 211

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60

Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80

Phe

<210> 212

<211> 88

<212> PRT

<213> Hippoglossus hippoglossus

<400> 212

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr

20 25 30
 Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
 35 40 45
 Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
 50 55 60
 Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
 65 70 75 80
 Gly Cys Gly Phe Cys Cys Lys Phe
 85

<210> 213
 <211> 88
 <212> PRT
 <213> Salmo salar

<400> 213
 Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
 1 5 10 15
 Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
 20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
 35 40 45
 Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
 50 55 60
 Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
 65 70 75 80
 Gly Cys Gly Phe Cys Cys Lys Phe
 85

<210> 214
 <211> 86
 <212> PRT
 <213> Salmo salar

<400> 214
 Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met Phe
 1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 215

<211> 58

<212> PRT

<213> Salmo salar

<400> 215

Arg Thr Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln
1 5 10 15

Gln Pro Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys
20 25 30

Arg Gln Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His
35 40 45

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
50 55

<210> 216

<211> 86

<212> PRT

<213> Salmo salar

<400> 216

Met Lys Thr Phe Ser Val Ala Val Val Pro Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln Ser His
50 55 60

Leu Ser Leu Cys Arg Trp Cys Phe Asn Cys Cys His Asn Lys Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 217

<211> 86

<212> PRT

<213> Salmo salar

<400> 217

Met Lys Gln Phe Ser Val Ala Val Val Leu Val Met Ala Cys Met Phe
1 5 10 15

Ile Val Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Leu Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 218

<211> 90

<212> PRT

<213> Pleuronectes americanus

<400> 218

Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15

Val Cys Ile Gln Cys Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Glu His Gln Val
35 40 45

Met Ser Met Glu Ser Trp Met Glu Asn Pro Thr Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
85 90

<210> 219

<211> 89

<212> PRT

<213> *Paralichthys olivaceus*

<400> 219

Met Lys Thr Phe Ser Val Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15

Val Cys Ile Gln Asp Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Ala His Gln Met
35 40 45

Met Ser Met Glu Ser Trp Met Glu Ser Pro Val Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Met Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Lys Gly Cys Gly Pro Cys Cys Lys Phe
85

<210> 220

<211> 84

<212> PRT

<213> *Pleuronectes americanus*

<400> 220

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 221
<211> 84
<212> PRT
<213> *Pleuronectes americanus*

<400> 221
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 222
<211> 58
<212> PRT
<213> *Pleuronectes americanus*

<400> 222
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Met Pro Tyr Asn
20 25 30

Arg Gln Lys Arg Gly Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Gly

35 40 45
 Ala Gly Val Cys Gly Met Cys Cys Lys Phe
 50 55

<210> 223
 <211> 83
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 223
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
 20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45

Pro Val Asp Ser Arg Ile Pro Tyr Asn Arg Gln Lys Arg Ser Phe Lys
 50 55 60

Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu Cys
 65 70 75 80

Cys Lys Phe

<210> 224
 <211> 84
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 224
 Met Lys Thr Cys Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Val Gln Glu Leu
 20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
 50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 225

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 225

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 226

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 226

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 227

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 227

Met Lys Thr Phe Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 228

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 228

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 229

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 229

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 230

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 230

Met Lys Thr Phe Ser Val Ala Val Ala Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe

50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 231
<211> 84
<212> PRT
<213> Hippoglossoides platessoides

<400> 231
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg His Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 232
<211> 84
<212> PRT
<213> Hippoglossoides platessoides

<400> 232
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Gly Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 233

<211> 84

<212> PRT

<213> Salmo salar

<400> 233

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Gly Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Ser

<210> 234

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 234

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 235

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 235

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 236

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 236

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 237

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 237

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 238

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 238

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 239

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 239

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 240

<211> 81

<212> PRT

<213> Pleuronectes americanus

<400> 240

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Gly Met Met Pro Asn Asn Arg Gln Lys Arg Ser Ala
50 55 60

Asp Cys Trp Pro Cys Cys Asn Gln Asn Gly Cys Gly Thr Cys Cys Lys
65 70 75 80

Val

<210> 241

<211> 81

<212> PRT

<213> *Pleuronectes ferruginea*

<400> 241

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60

Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80

Phe

<210> 242

<211> 81

<212> PRT

<213> *Pleuronectes ferruginea*

<400> 242

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu

20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
 50 55 60
 Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
 65 70 75 80

Phe

<210> 243
 <211> 27
 <212> PRT
 <213> Glyptocephalus cynoglossus

<400> 243
 Met Pro Asn Asn Arg Gln Lys Arg Gly Ser Asn Cys Lys Pro Cys Cys
 1 5 10 15

Asn His Asn Gly Cys Gly Thr Cys Cys Glu Val
 20 25

<210> 244
 <211> 67
 <212> PRT
 <213> Hippoglossoides platessoides

<400> 244
 Met Lys Phe Thr Ala Thr Phe Leu Met Leu Phe Ile Phe Val Leu Met
 1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Lys Ser Val Phe Arg Lys Ala Lys
 20 25 30

Lys Val Gly Lys Thr Val Gly Gly Leu Ala Leu Asp His Tyr Leu Gly
 35 40 45

Glu Gln Gln Glu Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Ser Ile
 50 55 60

Val Phe Asp
 65

<210> 245
<211> 67
<212> PRT
<213> Hippoglossoides platessoides

<400> 245
Met Lys Phe Thr Ala Thr Phe Leu Met Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Lys Lys Trp Phe Asn Arg Ala Lys
20 25 30

Lys Val Gly Lys Thr Val Gly Gly Leu Ala Val Asp His Tyr Leu Gly
35 40 45

Lys Gln Pro Glu Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Ser Ile
50 55 60

Val Phe Asp
65

<210> 246
<211> 66
<212> PRT
<213> Hippoglossoides platessoides

<400> 246
Met Lys Phe Thr Ala Asn Phe Leu Met Leu Phe Ile Phe Val Leu Met
1 5 10 15

Phe Glu Pro Gly Glu Cys Gly Trp Arg Thr Leu Leu Lys Lys Ala Glu
20 25 30

Val Lys Thr Val Gly Lys Leu Ala Leu Lys His Tyr Leu Gly Lys Gln
35 40 45

Pro Glu Leu Asp Lys Arg Ala Ile Asp Asp Asp Pro Ser Ile Ile Val
50 55 60

Phe Asp
65

<210> 247
<211> 68
<212> PRT
<213> Pleuronectes americanus

<400> 247

Met Lys Phe Thr Ala Thr Phe Leu Met Ile Ala Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala
20 25 30

His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr His Tyr Leu Gly
35 40 45

Asp Lys Gln Glu Leu Asn Lys Arg Ala Val Asp Glu Asp Pro Asn Val
50 55 60

Ile Val Phe Glu
65

<210> 248

<211> 56

<212> PRT

<213> *Pleuronectes ferruginea*

<400> 248

Met Lys Phe Thr Ala Thr Phe Leu Met Met Cys Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Arg Trp Gly Lys Trp Phe Lys Lys Ala Thr
20 25 30

His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr Ala Tyr Leu Gly
35 40 45

Asp Lys Gln Glu Leu Asp Lys Arg
50 55

<210> 249

<211> 68

<212> PRT

<213> *Pleuronectes americanus*

<400> 249

Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Ile Phe Lys His Gly Arg
20 25 30

His Ala Ala Lys His Ile Gly His Ala Ala Val Asn His Tyr Leu Gly
35 40 45

Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Asn Val
50 55 60

Ile Val Phe Glu
65

<210> 250

<211> 56

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 250

Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Ala Gly Trp Gly Ser Ile Phe Lys His Ile Phe
20 25 30

Lys Ala Gly Lys Phe Ile His Gly Ala Ile Gln Ala His Asn Asp Gly
35 40 45

Glu Glu Gln Asp Leu Asp Lys Arg
50 55

<210> 251

<211> 67

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 251

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Phe Thr Lys Gly Ala
20 25 30

Lys His Leu Gly Gln Ala Ala Ile Asn Gly Leu Ala Ser Cys Glu Glu
35 40 45

Gln Gln Glu Leu Asp Lys Arg Ser Glu Asp Asp Glu Pro Ser Ala Ile
50 55 60

Val Phe Glu
65

<210> 252

<211> 67
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 252
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala
20 25 30

Lys His Leu Gly Gln Ala Ala Ile Lys Gly Leu Ala Ser Cys Glu Glu
35 40 45

Gln Gln Glu Leu Asp Lys Arg Ser Met Asp Asp Glu Pro Ser Ala Ile
50 55 60

Val Phe Asp
65

<210> 253
<211> 67
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 253
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala
20 25 30

Lys His Leu Gly Gln Ala Ala Ile Lys Gly Leu Ala Ser Cys Glu Glu
35 40 45

Gln Gln Glu Leu Asp Lys Arg Ser Met Asp Asp Glu Pro Ser Ala Ile
50 55 60

Val Phe Asp
65

<210> 254
<211> 67
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 254
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met

1 5 10 15
 Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Phe Thr Lys Gly Ala
 20 25 30
 Lys His Leu Gly Gln Ala Ala Ile Asn Gly Leu Ala Ser Cys Glu Glu
 35 40 45
 Gln Gln Glu Leu Asp Lys Arg Ser Glu Asp Asp Glu Pro Ser Ala Ile
 50 55 60
 Val Phe Glu
 65

<210> 255
 <211> 62
 <212> PRT
 <213> Glyptocephalus cynoglossus

<400> 255
 Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
 1 5 10 15
 Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Phe Thr Lys Gly Glu
 20 25 30
 Arg Leu Ser Gln Arg His Phe Ala Asp Val Glu Gln Gln Glu Leu Asp
 35 40 45
 Lys Arg Ser Val Asp Asp Glu Pro Ser Ser Ile Ala Phe Asp
 50 55 60

<210> 256
 <211> 62
 <212> PRT
 <213> Glyptocephalus cynoglossus

<400> 256
 Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
 1 5 10 15
 Ala Glu Pro Gly Glu Gly Tyr Trp Arg Phe Arg Asn His Arg Gly Glu
 20 25 30
 Arg Leu Ser Gln Arg His Phe Ala Asp Val Glu Gln Gln Glu Leu Asp
 35 40 45
 Lys Arg Ser Val Asp Asp Glu Pro Ser Ser Ile Ala Phe Asp

50 55 60

<210> 257
<211> 65
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 257
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Val Ile Val Met Phe Glu
1 5 10 15

Pro Gly Glu Cys Phe Gly Met Leu Phe His Arg Val His His Ala Gly
20 25 30

Arg Leu Ile His Arg Phe Ile Lys Arg His Gly Asp Val Glu Gln Gln
35 40 45

Glu Leu Asp Lys Arg Ser Val Asp Asp Glu Pro Ser Ser Ile Ala Phe
50 55 60

Ala
65

<210> 258
<211> 76
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 258
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Asp Cys Ile Phe Gly Leu Ile Ala Thr Ala Val His
20 25 30

Asn Ala Gly Arg Leu Ile His Arg Leu Leu Gly Phe His His Gly Pro
35 40 45

Pro Gly Phe Trp His Gly Asp Val Glu Gln Gln Glu Leu Asp Lys Arg
50 55 60

Ser Val Asp Glu Glu Pro Ser Ala Ile Val Phe Glu
65 70 75

<210> 259
<211> 76
<212> PRT

<213> Glyptocephalus cynoglossus

<400> 259

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Asp Cys Ile Phe Gly Leu Ile Ala Thr Ala Val His
20 25 30

Asn Val Gly Arg Leu Val His Arg Leu Leu Gly Phe His His Gly Pro
35 40 45

Pro Gly Phe Trp His Gly Asp Val Glu Gln Gln Glu Leu Asp Lys Arg
50 55 60

Ser Val Asp Glu Glu Pro Ser Ala Ile Val Phe Glu
65 70 75

<210> 260

<211> 69

<212> PRT

<213> Pleuronectes americanus

<400> 260

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Ser Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Ala Leu Ile Lys Gly Ala Ile
20 25 30

His Gly Gly Arg Phe Ile His Gly Met Ile Gln Asn His His Gly Tyr
35 40 45

Asp Glu Gln Gln Glu Leu Asp Lys Arg Ser Val Asp Asp Asn Pro Gly
50 55 60

Ala Ile Val Phe Asp
65

<210> 261

<211> 68

<212> PRT

<213> Pleuronectes americanus

<400> 261

Met Lys Leu Ala Ala Ala Phe Leu Val Leu Phe Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Ser Phe Leu Gly Phe Leu Phe His Gly Ile Arg
20 25 30

His Gly Ile Lys Ala Ile His Gly Met Ile His Gly Asn Ser Leu Asp
35 40 45

Glu Met Gln Glu Leu Asp Lys Arg Ser Phe Asp Asp Asn Pro Asn Ala
50 55 60

Ile Val Phe Asp
65

<210> 262

<211> 68

<212> PRT

<213> *Pleuronectes ferruginea*

<400> 262

Met Lys Leu Ala Ala Ala Phe Leu Val Leu Phe Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Gly Phe Leu Gly Phe Leu Phe His Gly Ile His
20 25 30

His Gly Ile Arg Ala Ile His His Leu Ile His Gly Gln Arg Tyr Asp
35 40 45

Glu Gln Gln Glu Leu Asp Lys Arg Ser Val Asp Asp Asn Pro Gly Ala
50 55 60

Ile Val Phe Asp
65

<210> 263

<211> 55

<212> PRT

<213> *Hippoglossus hippoglossus*

<400> 263

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Leu Leu Phe His Gly Val His
20 25 30

His Val Gly Lys Leu Ile His Gly Leu Ile His Gly Gly Tyr Asp Glu

35 40 45

Gln Gln Glu Leu Asp Lys Arg
50 55

<210> 264
<211> 57
<212> PRT
<213> Hippoglossus hippoglossus

<400> 264
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Leu Leu Phe His Gly Val His
20 25 30

His Val Gly Lys Trp Ile His Gly Leu Ile His Gly His His Gly Tyr
35 40 45

Asp Glu Gln Gln Glu Leu Asp Lys Arg
50 55

<210> 265
<211> 61
<212> PRT
<213> Hippoglossus hippoglossus

<400> 265
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Gly Phe Leu Gly Ile Leu Phe His Gly Val His
20 25 30

His Gly Arg Lys Lys Ala Leu His Met Asn Ser Glu Arg Arg Ser Tyr
35 40 45

Asp Glu Arg Gln Gln Gln Gln Glu Leu Asp Lys Arg
50 55 60

<210> 266
<211> 60
<212> PRT
<213> Hippoglossus hippoglossus

<400> 266

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Gly Leu Gly Asn Trp Met Gly Pro His Ile Ser
20 25 30

Gly Glu Lys Lys Ala Leu His Met Asn Ser Glu Arg Arg Ser Tyr Asp
35 40 45

Glu Arg Gln Gln Gln Gln Glu Leu Asp Lys Arg
50 55 60

<210> 267

<211> 43

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 267

Met Lys Leu Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Gly Phe Trp Gly Lys Leu Phe Lys Leu Gly Leu
20 25 30

His Gly Ile Gly Leu Leu His Leu His Leu Gly
35 40

<210> 268

<211> 67

<212> PRT

<213> Pleuronectes americanus

<400> 268

Met Lys Phe Ala Thr Ala Phe Leu Met Leu Ser Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Arg Ser Thr Glu Asp Ile Ile Lys Ser Ile
20 25 30

Ser Gly Gly Gly Phe Leu Asn Ala Met Asn Ala Gly Tyr Asn Glu Gln
35 40 45

Gln Glu Leu Asn Lys Arg Ser Asp Asp Asp Asp Ser Pro Ser Leu Ile
50 55 60

Val Phe Asp
65

<210> 269
<211> 68
<212> PRT
<213> *Pleuronectes americanus*

<400> 269
Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15
Val Asp Leu Gly Glu Gly Arg Arg Lys Arg Lys Trp Leu Arg Arg Ile
20 25 30
Gly Lys Gly Val Lys Ile Ile Gly Gly Ala Ala Leu Asp His Leu Gly
35 40 45
Gln Gly Gln Val Gln Gly Gln Asp Tyr Asp Tyr Gln Glu Gly Gln Glu
50 55 60
Leu Asn Lys Arg
65

<210> 270
<211> 98
<212> PRT
<213> *Pleuronectes americanus*

<400> 270
Met Lys Phe Thr Ala Thr Leu Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15
Val Asp Leu Gly Glu Gly Arg Arg Lys Lys Lys Gly Ser Lys Arg Lys
20 25 30
Gly Ser Lys Gly Lys Gly Ser Lys Gly Lys Gly Arg Trp Leu Asp Arg
35 40 45
Ile Gly Lys Ala Gly Gly Ile Ile Ile Gly Gly Ala Leu Asp His Leu
50 55 60
Gly Gln Gly Gln Val Gln Gly Pro Asp Tyr Asp Tyr Gln Glu Gly Glu
65 70 75 80
Glu Leu Asn Lys Arg Ser Asp Asp Asp Asp Ser Pro Ser Leu Ile Phe
85 90 95
Phe Asp

<210> 271
 <211> 85
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 271
 Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
 1 5 10 15
 Val Asp Leu Gly Glu Gly Arg Arg Lys Lys Lys Gly Ser Lys Arg Lys
 20 25 30
 Gly Ser Lys Gly Lys Gly Ser Lys Gly Lys Gly Arg Trp Leu Glu Arg
 35 40 45
 Ile Gly Lys Ala Gly Gly Ile Ile Ile Gly Gly Ala Leu Asp His Leu
 50 55 60
 Gly Gln Gly Gln Val Gln Gly Pro Asp Tyr Asp Tyr Gln Glu Gly Glu
 65 70 75 80
 Glu Leu Asn Lys Arg
 85

<210> 272
 <211> 728
 <212> DNA
 <213> *Pleuronectes americanus*

<220>
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<220>
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 <222> (483)..(513)

<220>
 <221> CDS
 <222> (615)..(687)

<400> 272
 gaattgccc ttgccactt tgtattcgca aggtaatatc aatattttc aaattcattt 60
 agacgagacc aaccttttgg gaaatctgct cagcttatta ctgtataatg caaatgttaa 120
 tgatctttat tttctgttt ttttttgta ga atg aag ttc act gcc acc ttc 173

Met Lys Phe Thr Ala Thr Phe
1 5

ctc atg atg ttc atc ttc gtc ctc atg gtt gaa cct gga gag tgt ggt 221

Leu Met Met Phe Ile Phe Val Leu Met Val Glu Pro Gly Glu Cys Gly
10 15 20

tgg gga agc att ttt aag cat ggt cgt cat g gtaaagtcac ggaattaatt 272
Trp Gly Ser Ile Phe Lys His Gly Arg His
25 30

agctttaac ttgcaaata ttgtttttt tttaacagc tggaaactca caaaaataaa 332

tagccgatat atttgccaa ttataatcac ttgatctaa ataacaacct aaaaggcctt 392

tgattagcat gtttcttcaa taaatgatt gaacactact taaaggtatg tataaaacat 452

catcatgtgt tttgtttgt ttttacacag ct gcc aag cat att ggc cat gca 505
Ala Ala Lys His Ile Gly His Ala
35 40

gcc gtt aa gtaaggactt ctaccattat tactgtataa tttgatagt attatcacca 563
Ala Val Asn

gtattgttat tgacaacttc tcttttctt gctgatccga ctcacccgca g t cat 618
His
45

tac ctt ggc gag cag caa gat ctc gac aag cgc gca gtc gat gaa gac 666
Tyr Leu Gly Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu Asp
50 55 60

cca aat gtt att gtt ttt gaa tgaagaaatc gccttgaagg agccttcaga 717
Pro Asn Val Ile Val Phe Glu
65

agggcgaatt c 728

<210> 273
<211> 68
<212> PRT
<213> Pleuronectes americanus

<400> 273
Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Ile Phe Lys His Gly Arg
20 25 30

His Ala Ala Lys His Ile Gly His Ala Ala Val Asn His Tyr Leu Gly
35 40 45

Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Asn Val
50 55 60

Ile Val Phe Glu
65

<210> 274

<211> 60

<212> PRT

<213> *Pleuronectes americanus*

<400> 274

Met Lys Phe Thr Ala Thr Phe Leu Met Ile Ala Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala
20 25 30

His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr His Tyr Leu Gly
35 40 45

Asp Lys Gln Glu Leu Asn Lys Arg Ala Val Asp Glu
50 55 60

<210> 275

<211> 60

<212> PRT

<213> *Pleuronectes americanus*

<400> 275

Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Ile Phe Lys His Gly Arg
20 25 30

His Ala Ala Lys His Ile Gly His Ala Ala Val Asn His Tyr Leu Gly
35 40 45

Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu

50 55 60

<210> 276

<211> 61

<212> PRT

<213> *Pleuronectes americanus*

<400> 276

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Ser Leu Val Val Leu Met

1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Ala Leu Ile Lys Gly Ala Ile

20 25 30

His Gly Gly Arg Phe Ile His Gly Met Ile Gln Asn His His Gly Tyr

35 40 45

Asp Glu Gln Gln Glu Leu Asn Lys Arg Ala Val Asp Glu

50 55 60

<210> 277

<211> 72

<212> PRT

<213> *Pleuronectes americanus*

<400> 277

Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met

1 5 10 15

Val Asp Leu Gly Glu Gly Arg Arg Lys Arg Lys Trp Leu Arg Arg Ile

20 25 30

Gly Lys Gly Val Lys Ile Ile Gly Gly Ala Ala Leu Asp His Leu Gly

35 40 45

Gln Gly Gln Val Gln Gly Gln Asp Tyr Asp Tyr Gln Glu Gly Gln Glu

50 55 60

Leu Asn Lys Arg Ala Val Asp Glu

65 70

<210> 278

<211> 89

<212> PRT

<213> *Pleuronectes americanus*

<400> 278

Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Asp Leu Gly Glu Gly Arg Arg Lys Lys Lys Gly Ser Lys Arg Lys
20 25 30

Gly Ser Lys Gly Lys Gly Ser Lys Gly Lys Gly Arg Trp Leu Glu Arg
35 40 45

Ile Gly Lys Ala Gly Gly Ile Ile Ile Gly Gly Ala Leu Asp His Leu
50 55 60

Gly Gln Gly Gln Val Gln Gly Pro Asp Tyr Asp Tyr Gln Glu Gly Glu
65 70 75 80

Glu Leu Asn Lys Arg Ala Val Asp Glu
85

<210> 279

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 279

Met Trp Lys Asp Val Leu Lys Lys Ile Gly Thr Val Ala Leu His Ala
1 5 10 15

Gly Lys Ala Ala Leu Gly Ala Val
20

<210> 280

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 280

Ser Ile Gly Ser Ala Phe Lys Lys Ala Leu Pro Val Ala Lys Lys Ile
1 5 10 15

Gly Lys Ala Ala Leu Pro Ile Ala Lys

<210> 281
 <211> 934
 <212> DNA
 <213> Unknown Organism

<220>
 <221> CDS
 <222> (186)..(266)

<220>
 <221> CDS
 <222> (676)..(771)

<220>
 <223> Description of Unknown Organism: Type 1 salmonid
 hepcidin sequence

<220>
 <221> CDS
 <222> (361)..(441)

<400> 281
 ctgacaccaa aagaacaatc aatcaacttt ggactcgtct tagtgattg aaaattgtgc 60
 gttggagagc gtcgcttttt gggaacattg aagagttctg atcttcctca taaactgtca 120
 cttcaatttc aactgatttc aacaggactt ttaaataaggc tataaacttc ctaaaaaaaaa 180

cgaga atg aag gcc ttt agt gtt gca gtg gta ctc gtc att gca tgt atg 230
 Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met
 1 5 10 15

ttc atc ctt gaa agc acc gct gtt cct ttc tcc gag gtatgtcaaa 276
 Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu
 20 25

ttctccaaca ccaaccact acaaacatgt gtgcatcgat ttagagggtt ggcatgact 336

catttgtgcc taatgtcttt gcag gtg cga acg gag gag gtt gga agc ttt 387
 Val Arg Thr Glu Glu Val Gly Ser Phe
 30 35

gac agt cca gtt ggg gaa cat caa cag ccg ggc ggc gag tcc atg cat 435
 Asp Ser Pro Val Gly Glu His Gln Pro Gly Gly Glu Ser Met His
 40 45 50

ctg ccg gtacgttcaa ttgaatgaat gaattacgct aattaccttt agcaaattaa 491

Leu Pro

cattttagt gttgcgttt accctcggaa tagaattaga tcagtagcgc tagctgttaa 551

ccatttgatt gtgagccgtt agagggcttc agggcgagca gtgtgcaacg tggttgtgaa 611

gtggagatat acttacttgc ttgtccctc ctttttcat attattttct tggcggggat 671

acag gag cct ttc agg ttc aag cgt cag atc cac ctc tcc ctg tgc ggt 720
Glu Pro Phe Arg Phe Lys Arg Gln Ile His Leu Ser Leu Cys Gly
55 60 65

ttg tgc tgc aac tgc tgt cac aac att ggc tgt ggc ttt tgc tgc aaa 768
Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys Gly Phe Cys Cys Lys
70 75 80 85

ttc taaggacctg cccgcaacat ttctagtgt gtacatgttt gcaatgttt 821
Phe

ctttctgaga tgtgtgtttt gtgactatga taatgattta taaaatcact tcttattgtg 881

acactttaa aaaaataaac acattctttg aataacaaaa aaaaaaaaaa aaa 934

<210> 282

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Type 1 salmonid
hepcidin sequence

<400> 282

Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 283
<211> 557
<212> DNA
<213> Unknown Organism

<220>
<221> CDS
<222> (11)..(178)

<220>
<221> CDS
<222> (423)..(518)

<220>
<223> Description of Unknown Organism: Type1 Hepcidin
sequence

<400> 283
cgcccttaag atg aag aca ttc agt gtt gca gtt gca gtg gtg gtc gtc 49
Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val
1 5 10

ctc gca tgt atg ttc atc ctt gaa agc acc gct gtt cct ttc tcc gag 97
Leu Ala Cys Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu
15 20 25

gtg cga acg gag gag gtt gaa agc att gac agt cca gtt ggg gaa cat 145
Val Arg Thr Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His
30 35 40 45

caa cag ccg ggc ggc acg tcc atg aat ctg ccg gtacgttcaa ttagtgaat 198
Gln Gln Pro Gly Gly Thr Ser Met Asn Leu Pro
50 55

gaattaagta attaccttta gcaaattaac atctaagtgg ttgcgtttca cccttggaat 258

tgaattagcc cactagcgct agttgttaac catttgattg tgagccggta gagagggcctt 318

cagggcgagt agtgtgaata cttgtgaagt ggagacttgg acaaaaatac ttaccatgtg 378

cttgttccca cctttttcat ttctttttct tggctgagat acag atg cat ttc agg 434
Met His Phe Arg
60

ttc aag cgt cag agc cac ctc tcc ctg tgc cgt tgg tgc tgc aac tgc 482

Phe Lys Arg Gln Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys
65 70 75

tgt cac aac aag ggc tgt ggc ttc tgc tgc aaa ttc tgaggacctg 528
Cys His Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
80 85

ccagcaaagg gcgaattcgt ttaaaacac 557

<210> 284

<211> 88

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Type1 Hepcidin
sequence

<400> 284

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 285

<211> 81

<212> PRT

<213> Pleuronectes americanus

<400> 285

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu

20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Pro Val Asp Ser Gly Met Met Pro Asn Asn Arg Gln Lys Arg Ser Ala
 50 55 60
 Asp Cys Trp Pro Cys Cys Asn Gln Asn Gly Cys Gly Thr Cys Cys Lys
 65 70 75 80
 Val

<210> 286
 <211> 81
 <212> PRT
 <213> *Paralichthys olivaceus*

<400> 286
 Met Lys Thr Phe Ser Ala Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Gln
 35 40 45
 Ser Ala Asp Ser Trp Met Met Pro Gln Asn Arg Gln Lys Arg Asp Val
 50 55 60
 Lys Cys Gly Phe Cys Cys Lys Asp Gly Gly Cys Gly Val Cys Cys Asn
 65 70 75 80
 Phe

<210> 287
 <211> 84
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 287
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu

20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Pro Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 288
 <211> 84
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 288
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 289
 <211> 58
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 289
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Met Pro Tyr Asn

20 25 30
 Arg Gln Lys Arg Gly Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Gly
 35 40 45

Ala Gly Val Cys Gly Met Cys Cys Lys Phe
 50 55

<210> 290
 <211> 84
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 290
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
 35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
 50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
 65 70 75 80

Cys Cys Lys Phe

<210> 291
 <211> 84
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 291
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Ile Phe
 1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Gly Leu
 20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
 35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Ser

<210> 292
<211> 84
<212> PRT
<213> Hippoglossus hippoglossus

<400> 292
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 293
<211> 84
<212> PRT
<213> Hippoglossus hippoglossus

<400> 293
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 294
<211> 86
<212> PRT
<213> Hippoglossus hippoglossus

<400> 294
Met Lys Thr Cys Gly Phe Ala Ala Ala Val Ala Val Leu Leu Thr Phe
1 5 10 15

Ile Cys Ile Gln Glu Gly Cys Ala Val Ser Val Ala Glu Glu Gln Val
20 25 30

Leu Lys Asp Pro Met Gly Asn Gly Asp Pro Gln Glu Val Pro Ala Glu
35 40 45

Ser Ser Gly Arg Gln Trp Met Met Pro Phe His Phe Arg Gln Arg Arg
50 55 60

Gly Ser Gly Pro Met Pro Cys Arg Gln Cys Cys His Cys Cys Pro Glu
65 70 75 80

Asn Gly Arg Val Tyr Val
85

<210> 295
<211> 85
<212> PRT
<213> Morone saxatilis

<400> 295
Met Lys Thr Phe Ser Val Ala Val Ala Val Ala Val Val Leu Ala Phe
1 5 10 15

Ile Cys Leu Gln Glu Ser Ser Ala Val Pro Val Thr Glu Val Gln Glu
20 25 30

Leu Glu Glu Pro Met Ser Asn Glu Tyr Gln Glu Met Pro Val Glu Ser

35 40 45
 Trp Lys Met Pro Tyr Asn Asn Arg His Lys Arg His Ser Ser Pro Gly
 50 55 60
 Gly Cys Arg Phe Cys Cys Asn Cys Cys Pro Asn Met Ser Gly Cys Gly
 65 70 75 80
 Val Cys Cys Arg Phe
 85

<210> 296
 <211> 90
 <212> PRT
 <213> *Oryzias latipes*

<400> 296
 Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
 1 5 10 15
 Ile Cys Ile Leu Gln Ser Ser Ala Ile Pro Val Asn Gly Val Lys Glu
 20 25 30
 Leu Glu Glu Ala Ala Ser Asn Asp Thr Pro Val Ala Ala Arg His Glu
 35 40 45
 Met Ser Met Gln Pro Trp Met Leu Pro Asn His Ile Arg Glu Lys Arg
 50 55 60
 Gln Ser His Ile Ser Met Cys Thr Met Cys Cys Asn Cys Cys Lys Asn
 65 70 75 80
 Tyr Lys Gly Cys Gly Phe Cys Cys Arg Phe
 85 90

<210> 297
 <211> 90
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 297
 Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
 1 5 10 15
 Val Cys Ile Gln Cys Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
 20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Glu His Gln Val
35 40 45

Met Ser Met Glu Ser Trp Met Glu Asn Pro Thr Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
85 90

<210> 298

<211> 89

<212> PRT

<213> *Paralichthys olivaceus*

<220>

<221> MOD_RES

<222> (85)

<223> Variable amino acid

<400> 298

Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15

Val Cys Ile Gln Asp Ser Ser Ala Ile Pro Phe Gln Gly Val Gln Glu
20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Ala His Gln Met
35 40 45

Met Ser Met Glu Ser Trp Met Glu Ser Pro Val Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Met Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Lys Gly Cys Gly Xaa Cys Cys Lys Phe
85

<210> 299

<211> 88

<212> PRT

<213> *Hippoglossus hippoglossus*

<400> 299

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Leu Ala Cys

1 5 10 15
 Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
 20 25 30
 Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
 35 40 45
 Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
 50 55 60
 Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
 65 70 75 80
 Gly Cys Gly Phe Cys Cys Lys Phe
 85

<210> 300
 <211> 88
 <212> PRT
 <213> Salmo salar

<400> 300
 Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Leu Ala Cys
 1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
 20 25 30
 Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
 35 40 45
 Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
 50 55 60
 Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
 65 70 75 80
 Gly Cys Gly Phe Cys Cys Lys Phe
 85

<210> 301
 <211> 86
 <212> PRT
 <213> Salmo salar

<400> 301
 Met Lys Thr Phe Ser Val Ala Val Val Pro Val Ile Ala Cys Met Phe

1 5 10 15
 Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
 20 25 30
 Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
 35 40 45
 Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln Ser His
 50 55 60
 Leu Ser Leu Cys Arg Trp Cys Phe Asn Cys Cys His Asn Lys Gly Cys
 65 70 75 80
 Gly Phe Cys Cys Lys Phe
 85

<210> 302
 <211> 61
 <212> PRT
 <213> Oncorhynchus mykiss

<220>
 <221> MOD_RES
 <222> (37)
 <223> Variable amino acid

<220>
 <221> MOD_RES
 <222> (55)
 <223> Variable amino acid

<400> 302
 Leu Gln Val Leu Thr Glu Glu Val Gly Ser Ile Asp Ser Pro Val Gly
 1 5 10 15
 Glu His Gln Gln Pro Gly Gly Glu Ser Met Arg Leu Pro Glu His Phe
 20 25 30
 Arg Phe Lys Arg Xaa Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn
 35 40 45
 Cys Cys His Asn Lys Gly Xaa Gly Phe Cys Cys Lys Phe
 50 55 60

<210> 303
 <211> 86
 <212> PRT

<213> Salmo salar

<400> 303

Met Lys Gln Phe Ser Val Ala Val Val Leu Val Met Ala Cys Met Phe
1 5 10 15

Ile Val Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Leu Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 304

<211> 84

<212> PRT

<213> Homo sapiens

<400> 304

Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu Leu
1 5 10 15

Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln Thr Gly
20 25 30

Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala Arg Ala Ser
35 40 45

Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp Thr His Phe Pro
50 55 60

Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg Ser Lys Cys Gly Met
65 70 75 80

Cys Cys Lys Thr

<210> 305

<211> 30

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Formula peptide

<220>
<221> MOD_RES
<222> (9)..(11)
<223> Variable amino acid; this region may encompass 1-3 Xaa repeats

<220>
<221> MISC_FEATURE
<222> (12)..(13)
<223> this region may encompass 0-2 Leu residues

<220>
<221> MISC_FEATURE

<222> (14)..(14)
<223> may or may not be present

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> may or may not be present

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Variable amino acid; may or may not be present

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Variable amino acid; may or may not be present

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> may or may not be present

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> may or may not be present

<220>
<221> MISC_FEATURE
<222> (24)..(24)

<223> may or may not be present

<220>

<221> MISC_FEATURE

<222> (25)..(25)

<223> may or may not be present

<220>

<221> MISC_FEATURE

<222> (26)..(26)

<223> may or may not be present

<220>

<221> MISC_FEATURE

<222> (29)..(29)

<223> may or may not be present

<220>

<221> MISC_FEATURE

<222> (30)..(30)

<223> may or may not be present

<220>

<223> see specification as filed for detailed description of
preferred embodiments

<400> 305

Met Lys Phe Thr Ala Thr Phe Leu Xaa Xaa Xaa Leu Leu Phe Ile Phe
1 5 10 15

Xaa Val Leu Met Xaa Val Glu Asp Pro Leu Gly Glu Cys Gly
20 25 30

<210> 306

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Formula peptide

<220>

<221> MISC_FEATURE

<222> (1)..(1)

<223> may or may not be present

<220>

<221> MOD_RES

<222> (2)..(2)

<223> Variable amino acid; may or may not be present

<220>

<221> MOD_RES

<222> (3)..(4)

<223> Variable amino acid; this region may encompass 1-2 Xaa residues

<220>

<221> MISC_FEATURE

<222> (5)..(5)

<223> may or may not be present

<220>

<221> MOD_RES

<222> (6)..(8)

<223> Variable amino acid; this region may encompass 1-3 Xaa residues

<220>

<221> MISC_FEATURE

<222> (9)..(9)

<223> may or may not be present

<220>

<221> MISC_FEATURE

<222> (10)..(10)

<223> may or may not be present

<220>

<221> MOD_RES

<222> (12)..(12)

<223> Asn or Asp

<220>

<221> MOD_RES

<222> (15)..(15)

<223> Ala or Ser

<220>

<221> MOD_RES

<222> (18)..(18)

<223> Asp or Glu

<220>

<223> see specification as filed for detailed description of preferred embodiments

<400> 306

Tyr Xaa Xaa Xaa Glu Xaa Xaa Xaa Gln Glu Leu Xaa Lys Arg Xaa Val
1 5 10 15

Asp Xaa

<210> 307

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
signal peptide II

<220>

<221> MOD_RES

<222> (3)..(6)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (8)..(9)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (11)..(12)

<223> Variable amino acid

<400> 307

Met Lys Xaa Xaa Xaa Xaa Ala Xaa Xaa Val Xaa Xaa Val Leu
1 5 10

<210> 308

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
signal peptide III

<400> 308

Met Lys Thr Phe Ser Val Ala Val
1 5

<210> 309

<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
signal peptide IV

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Variable amino acid

<400> 309
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Xaa Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala
20

<210> 310
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
signal peptide V

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Thr or Val

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Leu or Val

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> may or may not be present

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Val or Cys

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Cys or Met

<220>
<221> MOD_RES
<222> (19)..(19)
<223> Ile or Phe

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln or Ile

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (22)..(22)
<223> Variable amino acid; may or may not be present

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ser or Thr

<220>
<221> MOD_RES
<222> (29)..(30)
<223> Variable amino acid

<400> 310
Met Lys Thr Phe Ser Val Ala Val Ala Val Xaa Xaa Val Leu Ala Phe
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Ala Val Pro Phe Xaa Xaa Val
20 25 30

<210> 311
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
prosequence I peptide

<220>
<221> MOD_RES

<222> (5)..(5)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Variable amino acid

<400> 311
Pro Glu Val Gln Xaa Leu Glu Glu Ala Xaa Ser Xaa Asp Asn Ala Ala
1 5 10 15

Ala Glu His Gln Glu
20

<210> 312
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
prosequence II peptide

<220>
<221> MOD_RES
<222> (3)..(4)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (7)..(7)

<223> Variable amino acid; may or may not be present

<220>

<221> MOD_RES

<222> (8)..(8)

<223> Leu or Thr

<220>

<221> MOD_RES

<222> (12)..(12)

<223> Glu or Gly

<220>

<221> MOD_RES

<222> (13)..(13)

<223> Gly or Ser

<220>

<221> MOD_RES

<222> (14)..(14)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (16)..(16)

<223> Thr or Ser

<220>

<221> MOD_RES

<222> (19)..(19)

<223> Ala or Gly

<220>

<221> MOD_RES

<222> (20)..(20)

<223> Variable amino acid

<400> 312

Pro Phe Xaa Xaa Val Xaa Xaa Xaa Glu Glu Val Xaa Xaa Xaa Asp Xaa

1

5

10

15

Pro Val Xaa Xaa His Gln

20

<210> 313

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 313

ggattcctgc tccaaca

17

<210> 314

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 314

taaggacctg cccgca

16

<210> 315

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (3)..(3)

<223> Gly or Lys

<220>

<221> MOD_RES

<222> (4)..(5)

<223> Variable amino acid

<220>

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<222> (7)..(7)

<223> Variable amino acid

<400> 315

Gly Trp Xaa Xaa Xaa Phe Xaa Lys

1

5

<210> 316

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (2)..(8)

<223> Variable amino acid

<220>

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<222> (10)..(10)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (12)..(13)

<223> Variable amino acid

<400> 316

Gly Xaa Xaa Xaa Xaa Xaa Xaa His Xaa Gly Xaa Xaa Ile His
1 5 10 15

<210> 317

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (11)..(12)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (17)..(17)

<223> Variable amino acid

<400> 317

Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Xaa Xaa Gly Val Cys Gly
1 5 10 15

Xaa Cys Cys

<210> 318
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (2)..(3)
<223> Variable amino acid

<220>
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<222> (9)..(9)
<223> Lys or His

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Variable amino acid

<400> 318
Cys Xaa Xaa Cys Cys Asn Cys Cys Xaa Xaa Lys Gly Cys Gly Phe Cys
1 5 10 15

Cys Lys Phe

<210> 319
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (13)..(14)
<223> Variable amino acid

<400> 319
Phe Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Xaa Xaa Cys Gly
1 5 10 15

Leu Cys Cys Lys Phe
20

<210> 320
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (5)..(6)
<223> Variable amino acid

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<223> Variable amino acid

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<222> (19)..(19)
<223> Variable amino acid

<400> 320
Xaa Xaa Xaa Cys Xaa Xaa Cys Cys Asn Xaa Xaa Gly Cys Gly Xaa Cys
1 5 10 15

Cys Lys Xaa

<210> 321
<211> 6
<212> PRT
<213> *Pleuronectes americanus*

<400> 321
Trp Met Glu Asn Pro Thr
1 5

<210> 322
<211> 6
<212> PRT
<213> Pleuronectes americanus

<400> 322
Gly Cys Gly Phe Cys Cys
1 5

<210> 323
<211> 6
<212> PRT
<213> Pleuronectes americanus

<400> 323
Gly Arg Arg Lys Arg Lys
1 5

<210> 324
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 324
aagatgaaga cattcagtggt tgca 24

<210> 325
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 325
gttggtggag caggaatcc 19

<210> 326
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 326
tgctggcagg tctcagaat ttgc 24

<210> 327
<211> 879
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 327
atgaagtca ctgccacct cctcatgatt ttaatcttcg tctcatgggt cgaacctgga 60
gagtgtgggt gtaagaaatg gtttaaaaag gctgctcac gtagagtcac ggaattaatt 120
tgcttttgc ttacaaata ttttttata gcagctggaa aatcacaaaa ataatagtc 180
gatgtatttg gccaattaga atcactttca ttcaataat aatctaaata gcaacctaaa 240
aggcctttga ttgatgtgt ccttcaatga aatggatgtt gaggtttatt ttgattctca 300
catgcaccga cctgctgcgg caacaattga attccaattt gtcccaaagg aattcaaagt 360
aaactttct aggcgattta atctttccat aactcggctt tgtttttaa aatatataat 420
aacfcaatcc ctatgataaa ataataacac atacattctg atttatacaa gacaagattg 480
aaaacttctt gaaagtatgt atcaaacatc atctgtttgt ataattgttt aacatttcac 540
aaaaagtgca actaattgtg ttatggaatt gtataaattg tcatttaata taatttttt 600
gagttatca atatgtgttt ttgtttgttt tacacagttg gcaagaacgt tggcaagggtg 660
gcccttaagt aaggacttct accattatta ctgtataatt ttgatagtat tatcaccagt 720
actgttattg acaacttctc ttttctgct gactctctcc atccgactca tctgcagtgc 780
ttaccttggt gaggcagcagc agctcgacaa gcgtgcagtc gatgaagagc ccagtgttat 840
tgcttttgac tgaagaagtc gccttgaagg agccttcag 879

<210> 328
<211> 335
<212> DNA
<213> *Pleuronectes americanus*

<220>
<221> CDS
<222> (27)..(230)

<400> 328

acaaagccca cttgtattc gcaaga atg aag ttc act gcc acc ttc ctc atg 53

Met Lys Phe Thr Ala Thr Phe Leu Met

1 5

atg gcc atc ttc gtc ctc atg gtt gaa cct gga gag tgt ggc tgg gga 101

Met Ala Ile Phe Val Leu Met Val Glu Pro Gly Glu Cys Gly Trp Gly

10 15 20 25

agc ttt ttt aaa aag gct gct cac gtt ggc aag cat gtt ggc aag gcg 149

Ser Phe Phe Lys Lys Ala Ala His Val Gly Lys His Val Gly Lys Ala

30 35 40

gcc ctt act cat tac ctt ggc gat aag cag gag ctc aac aag cgt gca 197

Ala Leu Thr His Tyr Leu Gly Asp Lys Gln Glu Leu Asn Lys Arg Ala

45 50 55

gtc gat gaa gac cca aat gtt att gtt ttt gaa tgaagaaatc gccttgaagg 250

Val Asp Glu Asp Pro Asn Val Ile Val Phe Glu

60 65

agccttcaga tgatatataa tccttcttgc tttaaatgaa ataatcaga cttttacctg 310

caacagcaaa aaaaaaaaaa aaaaa

335

<210> 329

<211> 68

<212> PRT

<213> Pleuronectes americanus

<400> 329

Met Lys Phe Thr Ala Thr Phe Leu Met Met Ala Ile Phe Val Leu Met

1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala

20 25 30

His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr His Tyr Leu Gly

35 40 45

Asp Lys Gln Glu Leu Asn Lys Arg Ala Val Asp Glu Asp Pro Asn Val

50 55 60

Ile Val Phe Glu

65

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